# X Trial Clinical Cases

If an answer is **green and underlined**, according to **Emokymai** it is correct 🦍
And if the answer is surely wrong:

Please note:

- Always append new questions at the bottom
- When solving, put the name behind it
- And if possible, always write whether one or more answers are correct: select one / Select one or more

Patient lab tests: RPR 1:64, TPHA 4+, no lesions on the skin and mucous membranes, no other symptoms, no recollection of possible contact. What is your treatment tactics? Select one:

a. Lumbar puncture, then decide on intravenous penicillin
b. Benzatine benzylpenicillin G 2,4 mln IU 1 dose (false: Alina) ⟶ MAYBE TRY AGAIN?
c. Doxycycline 200 mg/d. 14 d.
d. Doxycycline 200 mg/d. 30 d
e. Benzatine benzylpenicillin G 2,4 mln IU 3 doses

RPR 1:64 → active syphilis infection
TPHA 4+ → confirms treponemal infection

Patient lab tests: RPR 1:16, TPHA 4+, no lesions on the skin and mucous membranes, no other symptoms, no recollection of possible contact. Patient is HIV positive, on antiretroviral medication. Provided >10 sexual partners in the last 2 years. What is your treatment tactics? Select one:

a. Benzatine benzylpenicillin G 2,4 mln IU 1 dose
b. Neurologist, ophthalmologist consultation due to neurologic symtoms and fundoscopy
c. Lumbar puncture, then decide on intravenous penicillin
d. Benzatine benzylpenicillin G 2,4 min IU 3 doses
e. Doxycycline 200 mg/d. 30 d.
f. Doxycycline 200 mg/d. 14 d.

A 56-year-old woman is diagnosed with early secondary syphilis. What kind of treatment would you prescribe? Select one or more:

a. Doxycycline 100 mg twice per day p/o for 14 days
b. Benzathine benzylpenicillin 2.4 mln. UU IM, 1 injection
c. Benzathine benzylpenicillin 150 000 UU/kg for 10 days
d. Erythromycin 500 mg 4 times per day p/o for 28 days
e. Benzathine benzylpenicillin 2.4 mln. UU IM, 3 injections

A 58-years-old patient with a history of chronic duodenal ulcer. 5 years ago he was operated due to acute appendicitis. A day ago, a profuse vomiting of yellow color content began, abdominal distention and pain occured. What disease do you suspect? Select one:

a. Intestinal obstruction due to tumor
b. Intestinal obstruction due to adhaesions
c. Duodenal stricture due to ulcer
d. The duodenal ulcer penetration to the pancreas
e. The duodenal ulcer perforation

10 y old girl has frequent and painful urination without fever. Blood test normal, leukocituria 125 µl, hematuria 200 µl, positive nitritic reaction. Diagnosis of acute cystitis was put. What are your next steps: Select one:

a. Nitrofurans p/os 7 d.
b. Prescribe herbs for 5 d.
c. Amoxocillini p/os 7 d.
d. Gentamicin i/v 10 d.
e. Repeat urine test several times and treat only then

Because it's uncomplicated cystitis, the correct treatment is an oral antibiotic targeting common urinary bacteria, and nitrofurans are a standard first-line choice.

A 25-year-old primigravida presents at 38 weeks' gestation complaining of contractions every 5–7 minutes. On exam, she is 1 cm dilated, 50% effaced, and the fetal head is at –1 station. Her membranes are intact and there is no vaginal bleeding seen. After 2 hours of observation, the contractions have spaced out to every 15 minutes. The patient's cervix remains unchanged. Her vitals are within normal limits, and she has no medical problems. What is the best management plan for this patient? Select one:

a. Discharge home with labor precautions and instructions to follow up with her doctor
b. Oxytocin augmentation
c. Continued monitoring
d. Amniotomy induction

The newborn was born 40 weeks,with low body weight (2200 g), short height (46 cm) , small head circumference (32 cm). Abnormal appearance observing : small and wide-set eyes, a very thin upper lip, a smooth ridge between the upper lip and nose (smooth philtrum), small lower jaw. What causes perinatal hypoxia: Select one or more:

a. Intrauterine infection
b. Congenital heart disease
c. Birth trauma (no because it only causes hypoxia indirectly, not causing the symptoms mentioned)
d. Anemia in mother
e. Problems with the umbilical cord and placental blood circulation

The newborn was born 40 weeks,with low body weight (2200 g), short height (46 cm) , small head circumference (32 cm). Abnormal appearance observing : small and wide-set eyes, a very thin upper lip, a smooth ridge between the upper lip and nose (smooth philtrum), small lower jaw. Pathophysiology of perinatal hypoxia. Select one or more:

a. brain ischemia
b. dyslipidemia
c. hypoglycemia
d. apoptosis of neurons
e. Hypoxemia and hypercapnia

The newborn was born 40 weeks,with low body weight (2200 g), short height (46 cm) , small head circumference (32 cm). Abnormal appearance observing : small and wide-set eyes, a very thin upper lip, a smooth ridge between the upper lip and nose (smooth philtrum), small lower jaw. What could be the pathology? Select one:

a. 21 chromosome trisomy
b. Beckwith - Wiedemann Syndrome
c. Congenital CMV infection
d. Fetal Alcohol Syndrome
e. Diabetic fetopathy

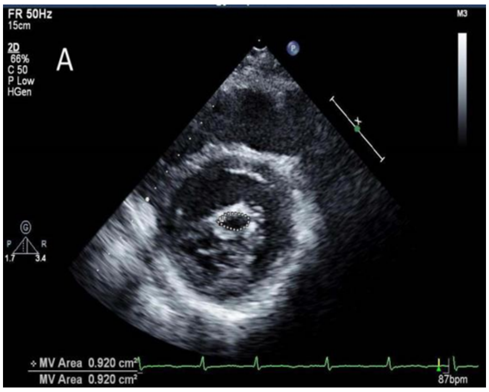
The newborn was born 40 weeks,with low body weight (2200 g), short height (46 cm) , small head circumference (32 cm). Abnormal appearance observing : small and wide-set eyes, a very thin upper lip, a smooth ridge between the upper lip and nose (smooth philtrum), small lower jaw. Temporary contraindications to breastfeeding. Select one or more:

a. severe neonatal condition
b. renal hydronephrosis
c. Congenital infection
d. congenital lip-palate defects
e. Prematurity < 30 weeks

3-weeks-old baby started vomiting after every feed, vomit without bile, bowel movement rarely with dark green stool, weight loss. On examination you detect upper abdominal mass. What is you first exam? Select one:

a. Ultrasound
b. Digestive system X-ray using contrast
c. Fibrogastroduodenoscopy

54-years old woman presents to the Emergency department with dyspnoea at rest and irregular heart rate up to 160 bpm. Her history is unremarkable. Auscultation was unremarkable because of fast heart rate. You are asked to evaluate her bedside echocardiogram. Her mitral valve is heavy narrowed with maximal trans-mitral jet velocity 1,8 m/s, mean trans-mitral gradient 7 mmHg and MV area as assessed by planimetry 0,92 cm2 (Figure below). What is the most likely diagnosis in the above-described patient?



Select one:

a. Normal mitral valve
b. Symptomatic severe aortic stenosis
c. Asymptomatic severe mitral stenosis (rheumatic origin)
d. Symptomatic severe mitral regurgitation
e. Symptomatic severe mitral stenosis (rheumatic origin)

One year old boy was brought by his parents to hospital because of dyspnoea. During clinical examination was fond: axillary body temperature 37,5 °C, respiratory rate 50 times per minute, pulse 150 times per minute, SpO2 94%, stridor, additional movements of respiratory intercostal muscles, no crackles during auscultation, only prolonged inspiration. No other abnormal findings. Your action(s): Select one:

a. Give dexamethasone intramuscular
b. Give inhalations with salbutamol
c. Perform general blood test
d. Give inhalation with adrenaline
e. Perform C-reactive protein test

This child has croup (viral upper airway edema causing stridor).
The reason the examiner chose dexamethasone is that corticosteroids are considered the cornerstone treatment for croup and improve airway swelling for all severities of disease.

A 16-year-old girl presents to the physician for annual examination. She denies any current symptoms or concerns. She has been sexually active for 1 year. She does not use condoms. On urogenital examination, she has a moder- ate amount of yellow mucopurulent discharge from the endocervix. There is no cervical motion, adnexal, or uterine tenderness. Microscopy of the vaginal discharge was normal except greater than 10 WBCs per high power field. Vaginal pH is normal. What is the most appropriate next step in the management? Select one:

a. Perform a Pap smear with reflex HPV testing
b. Perform PCR for chlamydial infection and gonorrhea
c. Send vaginal discharge for culture and Gram stain
d. Order a pelvic ultrasound
e. Treat for presumptive chlamydial infection and gonorrhea

64 years old heavy smoker presented with hoarseness, short of breath. Hoarseness appeared 6 months ago and from that time intentifies. During laryngoscopy you see hyperkeratosis on the left vocal fold, anterior part. Which of these statements are correct? Select one or more:

a. Most possible diagnosis- laryngeal cancer
b. Laryngeal papilloma is caused by papilloma virus, most commonly 6 and 11 types
c. Risk factors for laryngeal cancer are smoking, alcohol abuse, human papilloma virus, gastroesophageal reflux disease
d. Most possible diagnosis- laryngeal papilloma
e. Laryngeal cancer is classified by sites to supraglottic, glottic and subglottic

18 years old patient suffering from fever and sore throat began to complain of lacrimation and mild photophobia. On examination, follicles were found in the lower palpebral conjunctiva with tender preauricular lymph nodes. The most probable diagnoses are: Select one or more:

a. Phlyctenular conjunctivitis
b. Trachoma
c. Adenoviral keratoconjunctivitis
d. Staphylococal conjunctivitis
e. Adenoviral conjunctivitis

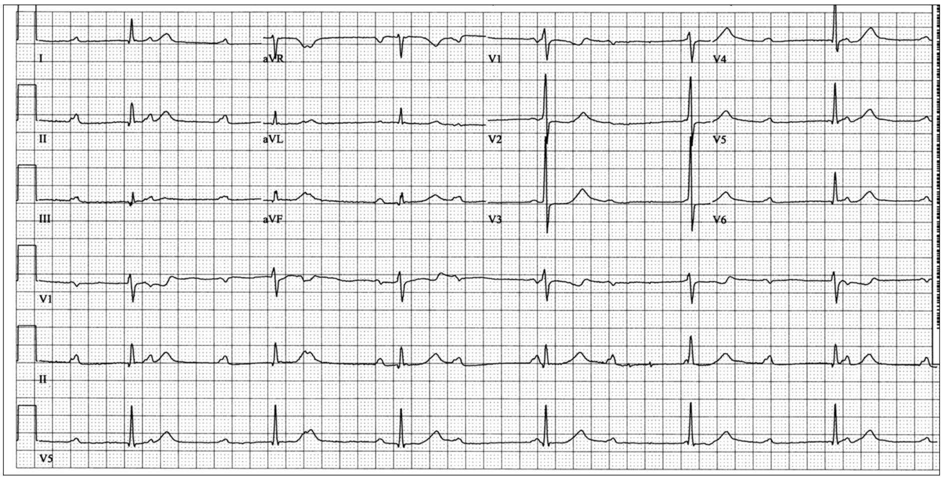
Your patient underwent caesarean delivery 2 days ago. Her temperature is 39 $^{0}$C. You find uterine tenderness and foul lochia on examination. Her incision appears intact and is without erythema. The routine management of this patient includes which of the following? Select one or more:

a. Obtain culture from uterus
b. Antibiotics selection should include anaerobic coverage and can be changed after culture results
c. Await culture results to start antibiotics
d. Obtain vaginal culture
e. Obtain blood culture

An obese 13-year-old boy started limping with his leg rotated externally. What disease would you suspect? Select one:

a. Perthes's disease
b. Coxitis
c. Slipped Capital Femoral Epiphysis SCFE

A 19-year-old female presents for a routine gynaecologic appointment. She reports no complaints. She has no known medical history other than a "low HR" shortly after she was born. She is not using any medications and denies illicit drug use. Her examination was within normal limits with exception of a low pulse rate at 42 bpm. The following ECG was obtained.



What is the most likely diagnosis? Select one:

a. Accelerated junction tachycardia
b. Third degree AV block
c. Ectopic atrial tachycardia
d. Ventricular tachycardia
e. Second degree AV block

A third-degree AV block (complete heart block) means the electrical signal from the atria is completely blocked from reaching the ventricles, so the atria and ventricles beat independently.
In this patient, the history of bradycardia since birth strongly suggests congenital complete heart block, which some patients can tolerate surprisingly well for years if a stable escape rhythm develops.

Eleven years old previously healthy girl was hospitalized because of acute pleuropneumonia of the right lung seen on X-ray. She is coughing already eight days, last five days she have temperature up to 38,5°C, the cough is troublesome. Clinical examination: respiratory rate 25 times per minute, pulse 80 times per minute, $SaO_2$ 93%, dullness during auscultation of the right lung. WBC $15*10^9$/l, CRP 22 mg/l. No other abnormal findings. Your action(s): Select one or more:

a. Start treatment new generation of macrolides
b. Perform ultrasound examination of pleura
c. Start treatment with amoxicillin
d. Performa chest computer tomography (CT)?
e. Start treatment with cefuroxime

Why Ultrasound? ✅
The clue:
"Pleuropneumonia" + dullness

suggests:
pleural involvement
parapneumonic effusion possible

A 75 years old patient came to your clinic with the complaint of relatively sudden onset of shortness of breath and weakness without any chest pain. ECG shows nonspecific ST-T changes. You would suspect possibility of painless, or silent, myocardial infarction in the: Select one:

a. Patient with myocardial infarction and premature ventricular contractions
b. Advanced coronary artery disease patient with unstable angina on multiple medications
c. Patient with Inferior myocardial infarction
d. Elderly diabetic patient
e. Premenopausal female

A silent (painless) myocardial infarction occurs when heart ischemia happens without classic chest pain,
most commonly due to impaired pain perception from autonomic neuropathy.
The classic high-yield patient is an elderly diabetic, who may present only with dyspnea, weakness, nausea, or confusion instead of chest pain

On examination at the general practitioner, a teenager was detected with arrhythmia. The boy has no subjective complaints, he spends most of his free time playing video games, avoids gym lessons. Last follow-up was performed 2 years ago. On examination: heart rate 100/min, arterial blood pressure 100/60mmHg, respiratory rate 34/min, 1st degree systolic murmur at the apex projection, other organs – normal findings. ECG showed normal voltage, QTc – 440ms, focal extrasystoles were found composing 10 % of all cardiocycles. Ultrasound showed dilated right chambers with thin walls, excretion fraction of the ventricles' 49%, and the 2nd degree mitral regurgitation. Please select the most adequate reason of this clinical appearance Select one:

a. Acute myocarditis, ventricular premature beats
b. Benign ventricular premature beats
c. Paroxysmal tachycardia
d. Dilated cardiomyopathy, ventricular premature beats
e. Respiratory infection

J.A. is a 24-year-old female, known to suffer from seasonal allergic rhinitis and allergy to nuts, was found collapsed at home. She had generalized erythematous raised lesions, edema of right eyelid, redness from upper chest to face. Her vital signs revealed a systolic blood pressure of 60 mmHg, pulse rate 130 bpm. Oral examination revealed a non-obstructing edema of soft palate, uvular and oral pharyngeal edem. There was expiratory wheeze on lung auscultation. What are clinical criteria for diagnosing anaphylaxis:
Select one:

a. Anaphylaxis is diagnosed only when there is a reduced BP and skin lesions appear immediately after contact with any substance
b. Acute onset of an illness (minutes to several hours) with involvement of the skin, mucosal tissues, or both (e.g., generalized hives, pruritus, or flushing, swollen lips, tongue, uvula and at least one of the following Respiratory compromise (e.g., dyspnea, wheeze-bronchospasm, stridor, reduced PEF, hypoxemia) Reduced blood pressure (BP) or associated symptoms of end-organ dysfunction (e.g., hypotonia [collapse], syncope, incontinence)
c. Reduced BP after exposure to known allergen for that patient minutes to several hours): Infants and children: Low systolic BP (age-specific) or greater than 30% decrease in systolic BP Adults: Systolic BP of less than 90 mmHg or greater than 30% decrease from that person's baseline
d. All of the above
e. Two or more of the following that occur rapidly after exposure to a likely allergen for that patient (minutes to several hours): Involvement of the skin-mucosal tissue (e.g., generalized hives, itch-flush, swollen lips, tongue, uvula) Respiratory compromise (e.g., dyspnea, wheeze-bronchospasm, stridor, reduced PEF, hypoxemia) Reduced BP or associated symptoms (e.g., hypotonia [collapse], syncope, incontinence) Persistent gastrointestinal symptoms (e.g.,crampy abdominal pain, vomiting)

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a. Intravenous clemastine and methylprednisolone 1 mg/kg must be administered as quickly as possible
b. A large-bore IV infusion of normal saline
c. Administer epinephrine 0,01% 0.3 ml IM in the upper lateral thigh
d. Put the patient in the recumbent position with lower extremities raised
e. Oxygen 100% by face mask

d. Recumbent with legs raised
Improves:
venous return
cardiac output
cerebral perfusion
Sudden standing in anaphylaxis can worsen collapse.

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a. Drug overdose
b. Food intoxication
c. Anaphylaxis
d. Shock from other causes: Cardiogenic, endotoxic, hypoglycemic etc.
e. Excessive production of histamine: systemic mastocytosis, urticaria pigmentosa, basophilic leukemia

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b+c falsch // a+b+d+e falsch

a. Take a carefull history and advice to avoid possible triggers based on it
b. Carry an epinephrine kit
c. Referral to allergologist after 3-4 weeks → *or earlier?*
d. Avoid all possible allergenic foods and drugs
e. Perform specific IgE detection against all possible allergens as quickly as possible and if something will be positive, then reffer to allergologist

The boy complains with fatique, palpitations, sometimes cardiac pain during rest and sport activity. He is a 12 year old, plays basketball for 4 years. What tests do you perform in this situation? Select one or more:

a. cardiac ultrasound
b. pulsoxymetry
c. Electrocardiogram
d. urine test
e. chest radiogram

A 55 years old man went to a family doctor because of the progressive dyspnea and specific sound while breathing. He was operated because of a perforative ulcer of the stomach and diffuse peritonitis 4 weeks ago. After the surgery he had a prolonged artificial ventilation via intubation tube for 3 days. He has history of smoking, 30 packyears, and has allergy to penicillin. Blood pressure 140/90 mmHg, pulse rate 72/min, respiratory rate 18/min. He has a stridor while breathing. What disease you would suspect at first? Select one:

a. Spontaneous pneumothorax
b. Exacerbation of chronic obstructive pulmonary disease
c. Bronchial asthma
d. Pneumonia
e. Postintubation tracheal stenosis

This patient most likely has Tracheal stenosis caused by prior prolonged intubation. The biggest clue is stridor weeks after intubation, which points to upper airway narrowing rather than a lower airway disease like COPD or asthma.

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a. Immediately to the emergency room for the abdominal surgeon's consultation
b. To the outpatient air, nose and throat physician's consultation (in 2 weeks)
c. To the outpatient pulmonologist's consultation (in 1 month)
d. Immediately to the emergency room for the thoracic surgeon's consultation
e. To the outpatient cardiologist's consultation (in 2 months)

stridor = significant stenosis, EMERGENCY !!!!

A 35-year-old male with fatigue, fever, and epistaxis for the past 3 months. In the peripheral blood total WBC count is 52,000/microliter (reference value 4,000-9,800/µL), blood smear revealed 50% of blast cells with Auer rods. Which one of the following disorders is the patient most likely to have? Select one:

a. Chronic myelogenous leukemia
b. Acute myelogenous leukemia
c. Chronic lymphocytic leukemia
d. Plasma cell leukemia
e. Infectious mononucleosis

A very high blast percentage (50%) means:
acute leukemia.

Chronic leukemias usually show:
more mature cells
not massive blast predominance.

Auer rods are:
needle-like azurophilic inclusions
found inside myeloblasts

They are strongly associated with:
myeloid leukemias, especially AML.

Patient newborn female. Neonate drools and has substantial mucus, with excessive oral secretions. During suckling at the breast the baby appears to choke and have difficulty maintaining an airway up to significant respiratory distress. Infant has the sonorous seal-bark cough. When oral tube was placed to suction the stomach, it becomes blocked 10-11 cm from the lips. What findings suggests your diagnosis? Select one:

a. There is gas below the diaphragm
b. All above
c. Seal-bark cough indicates concomitant tracheomalacia
d. Nasogastric tube coiling in esophagus

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a. Meconium ileus
b. Esophageal atresia with tracheoesophageal fistula
c. Boot shaped heart with intestinal obstruction
d. Isolated esophageal atresia

This newborn has classic Esophageal atresia with tracheoesophageal fistula:
excessive drooling, choking with feeds, respiratory distress, and inability to pass an oral tube into the stomach.
The "seal-bark" cough and likely gas in the abdomen strongly suggest
a tracheoesophageal fistula is present, not isolated esophageal atresia.

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a. Prophylactic broad-spectrum IV antibiotics (eg, ampicillin, gentamicin)
b. All above
c. Intravenous (IV) fluid containing an adequate glucose concentration (ie, 10% glucose)
d. A tube placed nasally or orally and connected to a continuous suction device
e. Discuss options for surgery

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a. Sweat test
b. Venous gas concentrations
c. Electrolyte levels
d. Complete blood count

A 3-year-old girl was feeling restless, lost her apetite after URTI she had before. On examination: no catarrh symptoms, enlarged spleen. Blood tests: WBC.-1,4x109/l, RBC.-1,8x1012/l, Hb-75g/l, MCV-84fl, MCH-29pg, MCHC-358g/l, RDW- 14%; PLT.-86x109/l; NEUT- 12%; LYMPH-80%; EOS-2%; MON- 6%. ESR - 4mm/h.; BONE MARROW BIOPSY: myelocariocytes 186x109/l, disturbed erythropoiesis, mature forms in granulopoiesis. What is your preliminary diagnosis? What test would be the best for diagnostics?
Select one:

a. Sinus histiocytosis and lymphonode biopsy
b. Microspherocytic hemolytic anemia and biochemistry .
c. Bone marrow aplasia and bone marrow trephine biopsy
d. Infection related hemophagocytosis and spleen biopsy
e. Familial lymphohistiocytosis and genetic testing.

In hemophagocytosis:

activated macrophages begin destroying blood cells
spleen enlarges!!!!!
cytopenias develop

48 years old woman with rheumatoid arthritis noticed new symptoms (her right calf became painful and swollen, together with new right knee joint pain and fever about 37,5$^0$C) after work in the garden. She denied trauma or skin injuries. During the examination – right calf especially in the popliteal field was swollen and hotter. No redness of skin is observed. Which two diseases from the list you will suspect?
Select one or more:

a. Erysipelas
b. Hemorrhagic vasculitis
c. Psoriasis
d. Rupture of Baker's (popliteal) cyst X
e. Deep vein thrombophlebitis X

Gestational diabetes was diagnosed for a 30-year-old woman at 28 weeks of gestation. How should she be managed during this pregnancy? Select one or more:

a. hospitalization every 4 weeks
b. physical activity
c. adopting a healthy eating pattern
d. termination of pregnancy at 28 weeks.
e. monitoring blood glucose levels

A new patient presents for her first prenatal visit at 26 weeks. She is concerned by rapid abdominal growth and dyspnea. Her fundal height measures 42 cm. Ultrasonographic examination reveals fetal size consistent with 26 weeks and an amniotic fluid index of 38 cm. How should the pregnant woman be managed?
Select one or more:

a. Fetal lung maturation
b. Hospitalization and amniocenthesis
c. diuretics
d. Antibiotics
e. Testing for causes of polyhydramnios

excessive amniotic fluid accumulates around the fetus

What are the clinical abdominal examination symptoms in acute appendicitis? Select one or more:

a. Kocher’s symptom
b. Murphy's symptom
c. Blumberg’s symptom
d. Rovsing's symptom
e. The symptom of Courvoisier

a. starts epigastric/periumbilical → moves to right lower quadrant.
d. Pressing the LEFT lower quadrant causes:
pain in the RIGHT lower quadrant.

A 64- year-old patient complains of a non healing „sore“ on his lower right lid for the past 5-6 months. The patient has noticed that ulcerative lesion (0,5 x 0,5 cm in size) on his lid sometimes is bleeding, encrusting. The site of the lesion – inner surface of the lower lid near the lacrimal punctum. What is the most probable diagnosis and how to prove it? Select one or more:

a. The diagnosis will be proven after biopsy
b. Presumable lower lid basal cell carinoma
c. Lower lid lymphoma
d. Presumable lower lid retinoblastoma
e. Presumable lower lid hemangioma

A 46-year-old G2P2 obese woman is referred from her primary care physician because of increasingly heavy and painful menses over the last 18 months. She has tried an oral contraceptive with some improvement of her bleeding but no improvement in her pain. She reports no other history of pelvic pain or abnormal bleeding in the past. She has never had an abnormal Pap smear and states she has never had any infections, “down there.” Her only medical problems are her obesity, hypertension and gastroesophageal reflux disease. On examination, you note normal external genitalia, vagina, and cervix. However, her uterus is slightly enlarged, mildly tender, and softer than you expected. She has no adnexal mass or tenderness. Which of these diagnoses is the least likely choice to keep in your differential? Select one:

a. Endometriosis
b. Irritable bowel syndrome
c. Adenomyosis
d. Endometrial hyperplasia
e. Leiomyoma

A 53-year-old man with multiple atherosclerotic risk factors, including hypertension, hyperlipidaemia, and tobacco use, presents with a 6-month history of dyspnoea and exertional chest tightness. He has orthopnoea and paroxysmal nocturnal dyspnoea.
Coronary angiography reveals the following stenotic lesions: Left main: 20% Proximal LAD: 80% Proximal circumflex: 85% Mid-RCA: 90% Distal vessels are adequate in size. The most appropriate next step includes:
Select one:

a. Initiation of therapy with a statin
b. Viability study
c. Initiation of therapy with an ACE inhibitor and beta blocker
d. Surgical consultation for CABG
e. All the above

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Echocardiography reveals a severely dilated LV with an EF of 20% and global ventricular hypokinesis. The ECG shows left bundle branch block (LBBB). The next steps in management of the patient and diagnostic evaluation should be:
Select one or more:

a. 24 hours Holter monitor
b. Stress test with measurement of maximal oxygen consumption (spiroergometry)
c. Optimisation of the heart failure medical therapy
d. Heart transplant evaluation
e. Coronary angiography

The date of a pregnant woman`s last menstrual period (LMP) is 20 of January 2018. Her menstrual period is normal every 28 days. The first ultrasound scan confirmed the gestational age by the LMP. Please estimate the due date (delivery date)? Select one:

a. 25 of November 2018
b. 25 of December 2018
c. 27 of December 2018
d. 27 of November 2018
e. 27 of October 2018

The date of a pregnant woman`s last menstrual period (LMP) is 20 of January 2018. Her menstrual period is normal every 28 days. The first ultrasound scan confirmed the gestational age by the LMP. The intavenous infusion  of Ringer's lactate was started, the mother was turned on the left side, the bleeding stopped. Maternal vital signs – stable (maternal pulse – 72 bpm, BP 120/70 mmHg), CTG – variable decelerations. What blood tests should be performed in such clinical situation? Select one or more:

a. Renal Function Tests (Creatnine, urea)
b. Complete Blood Count
c. Coagulation tests (fibrinogen, APTT)
d. Liver Function Tests-ALT, AST, LDH,
e. CRP(C reactive protein)

This question is describing an antepartum bleeding emergency,  most concerning for Placental abruption given the fetal distress (variable decelerations) and acute bleeding episode.
The key laboratory priorities are to assess maternal blood loss and coagulation status, because placental abruption can rapidly cause disseminated intravascular coagulation (DIC).

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a. Fetal scalp pH testing
b. Oxytocin for labour induction and fetal monitoring
c. Caesarean delivery due to fetal distress after 1 hour
d. Caesaeran delivery due to fetal distress immediately
e. Forceps for vaginal delivery immediately

Fetal scalp pH testing is a test performed during labor to determine whether a fetus with an abnormal CTG is actually becoming hypoxic and acidotic. It helps doctors decide whether the baby needs urgent delivery or whether labor can safely continue.

The date of a pregnant woman`s last menstrual period (LMP) is 20 of January 2018. Her menstrual period is normal every 28 days. The first ultrasound scan confirmed the gestational age by the LMP. The intavenous infusion  of Ringer's lactate was started, the mother was turned on the left side, the bleeding stopped. Maternal vital signs – stable (maternal pulse – 72 bpm, BP 120/70 mmHg), CTG – variable decelerations. Laboratory analyses – blood analyses – WBC – 10,4 x$10^9$/l, HGB 112 g/l, HCT 0,30, PLT – 130 x$10^9$/l, ALT – 35 U/l, AST 28 U/l, LDH – 240 U/l, fibrinogen concentration – 4,2 g/l, APTT – 32 s, creatinine and urea concentration – normal, urine analysis – protein 5 g/l, LEU – 10. The pregnant woman was given a tablet of labetolol (100 mg), the headache is still present. The BP 160/110 mmHg, pulse 90 bpm. The severe preeclampsia was diagnosed. How should the pregnant woman be managed? Select one or more:

a. Maternal and fetal monitoring
b. Labour induction after fetal lung maturation
c. Fetal lung maturation
d. Magnesium sulfate intravenously, antihypertensive drugs
e. Caesarean delivery immediately

This patient has Severe preeclampsia with severe hypertension, headache, and heavy proteinuria. The priorities are to stabilize the mother with magnesium sulfate and antihypertensives, closely monitor mother and fetus, and give fetal lung maturation steroids if pregnancy is still preterm and immediate delivery is not yet mandatory.

The date of a pregnant woman`s last menstrual period (LMP) is 20 of January 2018. Her menstrual period is normal every 28 days. The first ultrasound scan confirmed the gestational age by the LMP. The intavenous infusion of Ringer's lactate was started, the mother was turned on the left side, the bleeding stopped. Maternal vital signs – stable (maternal pulse – 72 bpm, BP 120/70 mmHg), CTG – bradycardia (12 min). How should she be managed? Select one:

a. Fetal scalp pH testing
b. Caesarean delivery due to fetal bradycardia after 1 hour
c. Oxytocin for labour induction and fetal monitoring
d. Forceps for vaginal delivery immediately
e. Caesaeran delivery due to fetal bradycardia immediately

A 47-year-old female has recurring episodes from the age of 15. During attacks her facial expression suddenly changes; she smacks her lips, and starts to clap rhythmically with her left hand. Episodes last up to 1 min, and she does not remember anything from the episodes. Attack frequency 2-4 times per month. Once in two months episode is followed by loss of consciousness and tonic-clonic seizures. Full recovery comes in 15-20 minutes. According to her family members, episodes are mainly provoked by stress and fatigue. In the childhood she had several prolonged febrile seizures. Neurological examination is normal, there are no changes in the brain computed tomography, and blood tests. What diagnosis do you suspect? Select one:

a. Generalized epilepsy with absences and generalized tonic-clonic seizures.
b. Recurrent transitory ischemic attack in the left hemisphere with syncope.
c. Epilepsy with focal unaware seizures evolving to bilateral tonic-clonic seizures
d. Frontal lobe epilepsy.
e. Psychogenic non-epileptic seizures.

72 years old male has weak urinary flow more than 1 year. Physical examination- enlarged, palpable urinary bladder. DRE (digital rectal examination) - prostate enlarged, not painful, with palpable thickness and hard node in the right lobe. PSA- 7.61 ng/ml. What disease do you suspect? Select one:

a. Prostate stones
b. Prostate carcinoma
c. Benign prostatic hyperpasia
d. Stricture of urethra
e. Prostatitis

20 years old student got sick on the 15th of January. He had a subfebrile temperature, running nose, sore throat. On the 22nd of January his temperature became 39ºC, he had a headache and nausea. The next day he was found disorientated, with haemorrhagic rash on his legs and chest. The patient was taken to the Emergency department, where his temperature was 38.7ºC, state of consciousness according to Glasgow coma scale - 12, the meningeal symptoms were positive, the pathological reflexes were negative. The haemorrhagic rash was observed on his legs and chest. What diagnostic tests have to be performed? Select one or more:

a. The blood cultures
b. The lumbal puncture and general analysis of cerebrospinal fluid
c. The culture of the cerebrospinal fluid
d. The skin biopsy
e. The serological analysis: IgM, IgG against *Neisseria meningitidis*

meningitis; blood culture and lumbar puncture wi
CSF

What is the main indication for surgical treatment of acute pancreatitis? Select one:

a. Infection of pancreatic necrosis
b. Fever over 39 degrees, persistent or aggravated abdominal pain and infiltration in the upper abdomen
c. Necrosis of pancreas and peripancreatic tissues on computed tomography scan
d. Free fluid in the abdominal cavity
e. Patient's worsening condition in the intensive care unit

The patient is 30 years old, hospitalized for the first time, not treated with antipsychotics. She is brought to the department on a stretcher. The patient lies as frozen, indifferent facial expression, gaze fixed on one point, reaction of pupils to light is good. The patient does not speak, does not fulfill any requests. After raising the patient's hand, it is kept raised for a long time. When the patient's pillow is pulled out, the head hangs in the air. The patient is not eating, urinating under herself. What syndrome is? Select one:

a. Catatonic syndrome
b. Alcohol intoxication
c. Paranoid syndrome
d. An attack of hysteria
e. Epileptic attack

Catatonia is a severe psychomotor syndrome where the brain becomes “stuck”
in abnormal motor behavior.

A 50-year-old female presents to the emergency department because of a 1-day history of abdominal pain. The pain is colicky in nature and worsens after fatty meals. The patient also reports nausea and vomiting. There is no significant past medical history. Her blood pressure is 120/70 mm Hg, pulse rate 90/min, the temperature is 37.6 C. Physical examination shows right upper quadrant pain and scleral icterus. Serum studies show total bilirubin 50 µmol/L, AST 40 U/L, ALT 40 U/L, Alkaline phosphatase= 180 U/L, and Y-Glutamyltransferase 100 U/L (N= 5-50). Imaging is most likely to show a stone located in which of the following structures? Select one:

a. Cystic duct
b. Common bile duct
c. Pancreatic duct
d. Gallbladder

This patient most likely has Choledocholithiasis — a gallstone obstructing the common bile duct. T
he key clues are RUQ pain after fatty meals + jaundice + cholestatic liver enzyme elevation, which point to
biliary obstruction outside the gallbladder itself.

Patient is admitted to hospital with suspicion of severe abdominal infection (peritonitis), which is most like caused by intestinal perforation and urgent surgical intervention is planned. What is the most appropriate antibiotic to be given for empiric therapy? Select one:

a. Penicillin G
b. Oxacillin
c. Cefazolin
d. Meropenem
e. Linezolid

Mero for peritonitis

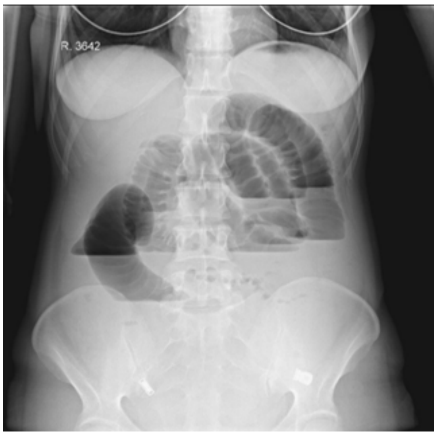
A 30-year-old patient breathes poorly through the left side of the nose from childhood, and on the right side - breathing gets impaired episodically. Had a nasal trauma, the outer axis of the nose is in the midline, administering anemization drops to the nose - left side without effect, right side breathing gets better. Cottle test negative. Most likely rhinoscopy findings are: Select one:

a. Nasal septum deviation to the right, left inferior turbinate is normal.
b. Nasal septum deviated to both sides, inferior turbinates are normal.
c. Nasal septum deviation to the left, right inferior turbinate is normal.
d. Nasal septum deviation to the left, hypertrophy of the right inferior turbinate.
e. Nasal septum deviation to the right, hypertrophy of the left inferior turbinate.

76 year-old woman came to a rheumatologist for consultation before right knee replacement surgery. She complains of head pain in occipital region and dizziness. She is suffering from rheumatoid arthritis for about 24 years. Her course of the disease was stable, but condition of right knee is constantly deteriorating. For many years in a row she is taking methotrexate, folic acid and periodically - steroid hormones. Objective evaluation: normal body temperature, BP 130/80 mmHg; respiratory rate 18 / min. BMI - 23 kg/m2. Cardiac and respiratory examination without objective deviations. Visible swollen metacarpophalangeal (MCP) joints and ulnar deviation of both hands. Cervical spine is very painful and the pain increases during movements, movement range of cervical spine is very limited. Limited flexion and extension of right knee. Genu varus deformity. X-ray abnormalities consistent with rheumatoid arthritis radiological stage IV - the medial knee joint space completely disappeared, subchondrial cysts and possible aseptic necrosis of the medial trochanter. Laboratory parameters of blood, indicators of inflammation, parameters of kidney and liver function - within normal limits. Chest x-ray and ECG within normal limits. What kind of testing should be carried out next for cervical pain? Select one:

a. Urinalysis
b. Spirometry
c. Cervical spine X-ray
d. Heart ultrasound
e. Abdominal ultrasound

A 50-year-old male presented with 4 hours of nausea, vomiting, cramping abdominal pain, bloating and obstipation. He had a history of appendectomy 3 years ago. Abdominal distention and diffuse abdominal pain was revealed during the physical examination. There was no abdominal tenderness or any signs of peritonitis. The abdominal radiography was performed (image 1).



This patient has classic Small bowel obstruction, most likely from postoperative adhesions after appendectomy. Because there are NO signs of peritonitis, ischemia, or perforation, the initial treatment is conservative management with bowel rest, NG decompression, and IV fluids.

What is the initial management for this patient? Select one:

a. Conservative treatment: nothing per os, nasogastric tube, intravenous fluids, enema
b. Conservative treatment: laxative medication, intravenous fluids, observation and reevaluation after 12 hours
c. Surgical treatment: extra laparoscopy for the determination of underlying disease
d. Surgical treatment: extra laparotomy and treatment of underlying disease
e. The patient should be treated by primary care physisian in an outpatient setting

You examine a teenager girl who is ill for 3 days. She complains of sore throat, febrile fever, swollen and painful wrists and ankles. She noticed her joints being swollen in the morning 2 months ago, but did nothing. She took two doses of amoxicillin at home with no effect. On examination: pale skin, T 38.5°C, hyperemic throat and tonsills, neck lymph nodes enlarged, both wrists, ankles are swollen, movement painful and restricted. She has problems walking and dressing herself. Blood tests: leucocytosis, anaemia, CRP 131mg/l. What is your preliminar diagnosis? Select one:

a. Sepsis
b. Reactive arthritis
c. Septic arthritis
d. Juvenile idiopathic arthritis
e. Osteomyelitis

78 years old patient is complaining of blurred vision in his right eye, which is increasing during the last year. He denies ocular trauma or surgery.

**Status ophthalmicus:**

- Best corrected visual acuity:
    - Oculus dexter = 0.4
    - Oculus sinister = 0.9
- Intraocular pressure:
    - Oculus dexter = 16 mmHg
    - Oculus sinister = 17 mmHg
- Slit lamp examination:
    - Oculus dexter – clear cornea. Anterior chamber of medium depth, pupil reaction to light normal, moderate lens opacification. Ophthalmoscopy – unremarkable.
    - Oculus sinister – clear cornea. Anterior chamber of medium depth, pupil reaction to light normal, mild lens opacification. Ophthalmoscopy – unremarkable.

Which diagnosis and treatment strategy is the most likely? Select one:

a. Cataract. Treatment – phacoemulsification
b. Lens subluxation. Treatment – par plana vitrectomy
c. Cataract. Treatment – laser photocoagulation
d. Mature intumescent cataract**.** Treatment – urgent extracapsular cataract extraction

Phacoemulsification is:
modern standard cataract surgery
minimally invasive
most common treatment worldwide

Procedure:
Ultrasound breaks up lens
Lens removed
Artificial intraocular lens implanted

Prenatally male fetus was diagnosed with bilateral hydronephrosis, oligohydroamnion was found. Postnatal ultrasonography showed bilateral ureterohydronephrosis, ureteric diameters 1 and 2cm, bladder wall thickening. Serum creatinine was 90 mkmol/l. What is the most possible diagnosis? Select one:

a. Bladder exstrophy
b. Urethral valves
c. Ureterocele
d. Pyeloureteral junction obstruction

Posterior Urethral Valves are:
abnormal obstructing membranes in posterior urethra
occur ONLY in boys

They obstruct urine outflow:
bladder pressure rises
bladder wall thickens
urine backs up into ureters/kidneys

Livor mortis does not change appearance upon direct pressure. The location of livor mortis does not change when the body is rotated. Which stage of livor mortis is described? Select one:

a. Stasis
b. Imbibition
c. Hypostasis
d. pergamentation
e. neither of the mentioned stages

What Is Livor Mortis?
After death:
blood settles in dependent body areas due to gravity
skin becomes purple-red

Stages of Livor Mortis ⭐
1. Hypostasis (early)
blood still inside vessels
blanching occurs with pressure
shifts if body moved
“Not fixed yet”
2. Stasis

Intermediate transition stage.

Blood pooling becomes more stable.

3. Imbibition ⭐⭐⭐
RBCs break down
hemoglobin leaks into tissues
lividity becomes fixed

So:
❌ no blanching
❌ no shifting with body movement

32 year-old woman was admitted to the hospital due to bleeding during pregnancy. 32 weeks of pregnancy, the fourth pregnancy, the third delivery, previous 3 caesarean delivery, no antenatal care. The estimated blood loss about 250 ml till admission to the hospital. Maternal examination – pulse 90 bpm, BP 120/70 mmHg, no contractions, vaginal examination – bloody discharges in the vagina, external os of the cervix closed. Ultrasound examination – placenta praevia, no signs of abruption, cervical length 45 mm, internal os closed, estimated fetal weight 1650 g (normal for gestational age), amniotic fluid index 15 cm, NST – reactive. How should the pregnant woman be managed? Select one or more:

a. Admission to the hospital, maternal and fetal monitoring
b. Blood tests for prenatal infection (HIV, syphilis)
c. Caesarean delivey immediately
d. Blood tests (blood group, complete blood count, coagulation tests)
e. Fetal lung maturation

32 year-old woman was admitted to the hospital due to bleeding during pregnancy. 32 weeks of pregnancy, the fourth pregnancy, the third delivery, previous 3 caesarean delivery, no antenatal care. The estimated blood loss about 500 ml till admission to the hospital. Maternal examination – pulse 90 bpm, BP 100/50 mmHg, no contractions, vaginal examination – bleeding, 50 ml of the blood in the vagina, external os of the cervix closed. Ultrasound examination – signs of placental abruption, cervical length 45 mm, internal os closed, estimated fetal weight 1650 g (normal for gestational age), amniotic fluid index 15 cm, NST – decelarations. How should the pregnant woman be managed? Select one or more:

a. Blood tests for prenatal infection (HIV, syphilis)
b. Intravenous infusion of Ringer`s lactate and Caesarean delivery immediately
c. Blood tests (blood group, complete blood count, coagulation tests)
d. Admission to the hospital, maternal and fetal monitoring
e. Fetal lung maturation

This patient has Placental abruption with significant bleeding and fetal distress (NST decelerations).
Because placental abruption can rapidly threaten both maternal and fetal life, the priorities are maternal resuscitation, urgent cesarean delivery, and hemorrhage/coagulation evaluation.

32 year-old woman was admitted to the hospital due to bleeding during pregnancy. 32 weeks of pregnancy, the fourth pregnancy, the third delivery, previous 3 caesarean delivery, no antenatal care. The estimated blood loss about 1000 ml till admission to the hospital. Maternal examination – pulse 100 bpm, BP 80/50 mmHg, no contractions, vaginal examination – bleeding, 200 ml of the blood in the vagina, external os of the cervix closed. Ultrasound examination – placenta praevia, no signs of abruption, cervical length 45 mm, internal os closed, estimated fetal weight 1650 g (normal for gestational age), amniotic fluid index 15 cm, NST – decelarations. How should the pregnant woman be managed? Select one or more:

a. Caesarean delivery immediately
b. Fetal lung maturation
c. Admission to the hospital, maternal and fetal monitoring
d. Blood tests for prenatal infection (HIV, syphilis)
e. Blood tests (blood group, complete blood count, coagulation tests)

Gestation 34 weeks, no uterine contractions, by ultrasound examination was diagnosed breech presentation, treatment option: Select one

a. Cesarean Section
b. Labor induction
c. Internal cephalic version
d. External cephalic version
e. Wait

This patient has a Breech presentation at 34 weeks without labor.

At this gestational age, many fetuses will still spontaneously turn to cephalic presentation,

so the appropriate management is expectant management rather than immediate intervention.

A 20-year-old nulligravid young woman presents to the emergency department 4 hours after the onset of nausea, vomiting, and moder- ate lower abdominal pain. Her last menstrual period was 2 weeks ago. She reports three new sexual partners in the last 6 months and uses condoms intermittently. She denies any history of sexually transmitted infections. Her temperature is 38.0°C, pulse rate is 96/min, respirations are 20/min, and BP is 110/60 mm Hg. Examination shows a soft abdomen and lower quadrant tenderness without guarding or rebound. On pelvic examination, there is a mucopurulent cervical discharge, moderate cervical motion tenderness, and uterine tenderness. Bilateral adnexa are nontender and without enlargement. What is the most likely diagnosis? Select one:

a. Ovarian torsion
b. Cervicitis
c. Pelvic inflammatory disease
d. Ectopic pregnancy
e. Pyelonephritis

This patient most likely has Pelvic inflammatory disease caused by sexually transmitted infection ascending into the uterus/fallopian tubes. The key diagnostic clues are cervical motion tenderness + uterine tenderness + mucopurulent discharge in a sexually active young woman.

A 68-year-old female arrived at a hospital emergency department complaining of severe pain in the right eye and decreased vision in the right eye. Symptoms appeared yesterday when the patient was cleaning her room. The patient stated that during the past 6 months there were a few episodes of blurred vision. V RE = 0.02 (not correctable), V LE = 1.0 ; RE – rigid eyeball when palpating, intense conjunctival injection, corneal epithelial edema, stroma is opaque, shallow anterior chamber, pupil is dilated, irregular, not responsive to light, lense is clear, red fundus reflex, the details are unclear because of cloudy cornea. LE - without pathological changes. What is the initial preliminary clinical diagnosis and what general practitioner's tactics should be? Select one:

a. Acute adenoviral conjunctivitis of the right eye. Urgent referral to an ophthalmologist.
b. Tractional retinal detachment in the right eye. Urgent referral to an ophthalmologist anticipating Pars Plana Vitrectomy.
c. Bacterial conjunctivitis of the right eye. GP should prescribe antibiotic eye drops and set second appointment in 2 days.
d. Acute Angle Closure Glaucoma. Urgent referral to an ophthalmologist.
e. Inflammation of the uvea in the right eye. Urgent referral to an ophthalmologist. Rheumatologist consultation.

Mother of a 6-months-old baby complains of serial convulsions that started several days ago. She noticed that her baby became dull and slow, lost his psychomotor skills (developmental regress). Pregnancy and new-born period was fluent. On examination: the baby is dull; no specific pathological signs were detected. What should you do? Select one:

West syndrome, a severe epileptic encephalopathy of infancy.
The key clues are serial spasms + developmental regression in a 6-month-old,

a. Refer to a neurologist with suspicion of cerebral palsy.
b. Refer to intensive care unit for monitoring and intravenous anti-convulsant treatment.
c. Diagnose epilepsy and prescribe valproic acid for initial treatment.
d. Refer to a development centre suspecting developmental disorder.
e. Refer to an urgent diagnostic and treatment suspecting West syndrome.

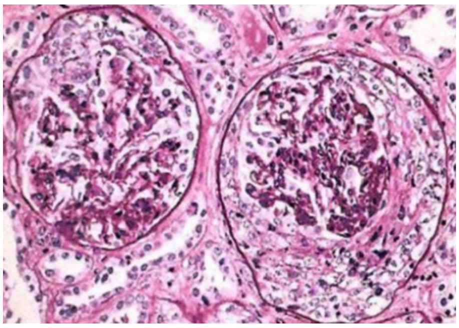
The initial step that leads to placental separation following delivery of the infant is uterine tension which pulls placenta from the implantation site. How You will ensure this process? Select one:

a. Clamping of the cord
b. Controlled cord traction
c. All of the mentioned
d. Intravenous Oxytocin injection

Parents of a 12-year-old boy came to you complaining of his lower physical and social activity. On examination: T – 36.8C, heart rate 100/min, arterial blood pressure 105/65mmHg (50-75‰), respiratory rate 22/min, 1st degree systolic murmur at the apex, other organs – N. Tests that would help you prove patients heart failure: Select one:

a. 12-leads electrocardiogram, heart ultrasound
b. Heart ultrasound
c. 12-leads electrocardiogram, heart ultrasound, exercise tolerance testing, 24-hour electrocardiogram monitoring
d. 12-leads electrocardiogram, chest X-ray, pulmonary function testing, heart ultrasound
e. 12-leads electrocardiogram, chest X-ray, 24-hour electrocardiogram monitoring, endomyocardial biopsy

A 38-year-old male underwent kidney biopsy due to suddenly decreased kidney function and nephritic syndrome. Light microscopy findings are shown below. Immunofluorescence was normal. Electron microscopy was not performed. Which additional test should be performed?



Select one:

a. Serum amyloid A
b. Anti-ds-DNA antibodies
c. Serum protein electrophoresis
d. ANCA test

Patient is suffering from chronic bronchitis for about 15 years. He smokes for about 20 yrs. He was consulted by family physician because he was "told by his wife" as he has chronic cough. Patient's vital signs are normal. Which answer is incorrect? Select one:

a. I will conduct sputum cytology test.
b. I will perform chest X-ray.
c. I will prescribe mucolytics (eg acetylcysteine). As there is no evidence of respiratory tract disease and cough is a common symptom in smokers, there is no objective evidence of lung disease.
d. I would recommend him to quit smoking.
e. I will perform spirometry.

5 y old boy has upper respiratory tract infection with normal t. Next day mother noticed, that he passed dark urine. Then addressed the doctor. Clinical evaluation showed no edema, BP 100/55 mm Hg. Urine test: hematuria up to 200, leukocytes 3- 4, proteinuria 0.3g/l. What disease has the boy? Select one:

a. Ig A nefropathy.
b. Acute postinfectious glomerulonephritis.
c. Alport syndrome
d. Urinary tract infection.
e. Toxic kidney.

IgA nephropathy happens when:
IgA immune complexes deposit in glomeruli
often triggered by mucosal infections (URI)

This child most likely has IgA nephropathy, a glomerular disease that classically causes hematuria occurring at the same time or within 1–2 days of an upper respiratory infection. The key clue is the VERY rapid appearance of dark urine immediately after the URI.

Patient every day has heartburn and gurgitation, sometimes those symptoms he feels at night. What kind of treatment you will apply to this patient? Select one:

a. Order x-ray of esophagus
b. Endoscopic treatment
c. Order 24 hour pH-metry
d. Ranitidine in a case of heartburn
e. Start treatment with proton pump inhibitors

A 40 year-old woman did her prenatal tests at 10 weeks of pregnancy. The blood analyses were normal, urine culture positive ( *E.coli* $\geq 10^5$ ). How should the pregnant woman be managed? Select one or more:

a. Amoxicillinum 250 mg x3 ( for 7 days)
b. Repeat the urine culture after 4 weeks without treatment
c. Amoxicillinum 3 g (1 day course)
d. Repeat the urine culture after treatment
e. Cranberries for 1 week and repeat urine culture

31 years old woman presented at the emergency room complaining of a “curtain-like” shadow in the medial side in her left eye. She experienced lightning in her left eye for several days. No ocular pain.

**Status ophthalmicus:**

- Best corrected visual acuity:
    - Oculus dexter = 1.0
    - Oculus sinister = 0.8
- Intraocular pressure:
    - Oculus dexter = 17,3 mmHg
    - Oculus sinister = 13,4 mmHg
- Slit lamp examination:
    - Oculus dexter – unremarkale.
    - Oculus sinister – anterior segment unremarkable, vitreous with some pigmented particles, in the temporal side of the fundus – undulating grey membrane.

Which diagnosis is the most likely? Select one:

a. Toxoplasmic chorioretinitis
b. Central retinal artery occlusion
c. Rhegmatogenous retinal detachment
d. Tractional retinal detachment
e. Dry age-related macular degeneration

Flashes + floaters + curtain over vision = retinal detachment until proven otherwise.

Rhegma = break/tear
Genous = produced by

A 55-year old male patient has suffered a sudden onset of sharp chest pain radiating to the back, associated with general weakness, and dizziness. He has also had an episode of syncope at home. On presentation to the Emergency Department, the patient is complaining of pain in his abdomen and left leg. Which tests in this scenario are first line to rule out a life-threatening condition? Select one or more:

a. Computed tomography of the chest
b. Abdominal Ultrasound and Computed Tomography of the Head due to syncope
c. Magnetic resonance imaging tomography of the thorax and lumbar parts of the spine
d. Electromyography
e. Echocardiography

An overweight (BMI 35 kg/m2) 45-year old man has been referred for investigation of his high blood pressure (160/95 mmHg). He has no significant past medical or family history, but socially he consumes at least 15 pints (about 7 litres) of beer per week and smokes 5 cigarettes per day. What is appropriate management plan? Select one:

a. Renal ultrasound
b. Commence an ACE inhibitor
c. Advise lifestyle changes including weight loss, exercise, and reduced alcohol intake, consider antihypertensive treatment
d. A SPECT scan
e. Refer to an endocrinologist

A 59 y.o male with no reported past medical history presents with complaints of progressive weakness, shortness of breath, dysthymic mood, bilateral feet tingling, and jaundice. The patient visited his primary care physician for progressive symptoms and found to be severely anemic (Hgb – 50 g/l). He was then referred to the hospital for further evaluation and blood transfusion. In laboratory findings: CBC – pancytopenia, high MCV; high LDH, very low haptoglobin, high bilirubin, negative direct Coombs tests. Which diagnosis is the most likely? Select one:

a. Immune hemolysis
b. Aplastic anemia + non-imune hemolysis
c. Aplastic anemia
d. Posthemorrhagic anemia + immune hemolysis
e. Megaloblastic anemia + non-imune hemolysis

Megaloblastic anemia, most likely from vitamin B12 deficiency. The key clues are macrocytic pancytopenia + neurologic symptoms + jaundice/hemolysis markers with a negative Coombs test, which is classic for ineffective erythropoiesis causing nonimmune hemolysis.

70-year-old man. An endoscopy was performed - a 3 cm tumor was found in the lesser curve in the upper third. A biopsy was taken - adenocarcinoma. Computed tomography images showed a T3N1M0 tumor. What is the next first step for such a patient? Select one:

a. Operative treatment – gastrectomy
b. Diagnostic laparoscopy
c. Chemotherapy followed by surgery
d. Chemoradiation followed by surgery

A 54-year-old female, without complains. A prophylactic chest X-ray examination and later chest computed tomography showed a 4 cm size opacity in the right lungs' 3rd segment. Bronchoscopic lung biopsy was made, adenocarcinoma was confirmed. EGFR (epidermal growth factor receptor) exon 19 mutation was positive. Patient is a never smoker, with a history of passive smoking (husband was a smoker). No comorbidities, good performance status. What would be your following steps? Which answer is correct? Select one:

a. Sending the patient for surgical treatment, later – starting treatment (biological therapy) with tyrosine kinase inhibitor (TKI).
b. Starting treatment (biological therapy) with tyrosine kinase inhibitor (TKI), later – surgical treatment.
c. Sending the patient for following examination – positron emission tomography – computed tomography (PET/CT) scanning and brain magnetic resonance imaging (MRI). Later, depending on examination findings, appointing an endobronchial ultrasound (EBUS) aspiration biopsy of mediastinal nodes or a biopsy of other lymph nodes. Starting treatment depending on examination findings.
d. Sending the patient for surgical treatment.
e. Starting treatment (biological therapy) with tyrosine kinase inhibitor (TKI).

Previously healthy 2 years old child presents at the emergency department due to high fever, lethargy, vomiting and rash. Which type of lesion/s is/are the most worrying? Select one or more:

a. erythema
b. papule
c. Petechia
d. macule
e. Purpura

**they indicate bleeding under the skin, not just inflammation.**

Your patient at 37 weeks gestation, fell and struck her abdomen on the pavement. Fetal heart rate is 140 bpm, NST – reactive. Her vital signs are stable and she denies pain. Cervical examination reveals no bleeding. Her cervix is 2 cm dilated and 50 percent effaced. The fetal head is at 0 station. The next most appropriate management of this patient includes which of the following? Select one or more:

a. Discharge home to bed rest for the following 24 hours
b. Discharge home after monitoring if no progress in labour and no signs of fetal hypoxia
c. Induction of labour
d. Caesarean delivery immediately
e. Monitoring in labour and delivery for several hours

A 45-year-old woman presents with ongoing chest pain. Immediate observations reveal BP 140/80 mmHg, heart rate 90 bpm, and saturation 99% on room air. What should you do next? Select one:

a. Administer analgesia
b. Gain IV access
c. Give aspirin 300 mg
d. Administer oxygen
e. Perform 12-lead ECG

The patient has had large wheals, episodic swelling of the lips or eyelids, which developed after acute viral infection of the upper airways. He is ill for 4 weeks without other symptoms. No medications have been taken for the last 4 weeks. On inspection skin wheals of different sizes and swelling of the lower left eyelid can be seen. Which diagnosis is correct? Select one:

a. Maculopapular exanthema.
b. Cholinergic urticaria.
c. Chronic urticaria, angioedema.
d. Allergic urticaria.
e. Acute urticaria, angioedema.

ecurrent wheals and eyelid/lip swelling persisting for 4 weeks after infection without a clear trigger, which fits evolving chronic spontaneous urticaria rather than acute allergic urticaria.

72-years-old patient with pronounced jaundice, 2.2 cm diameter pancreatic head tumor was diagnosed by ultrasound examination, as well as dilated intrahepatic and extrahepatic bile ducts. Gall bladder is 12 cm long. Radiologically, no signs of tumor overgrowth to the surrounding blood vessels. Which surgery will you choose? Select one:

a. Endoscopic retrograde cholangiography and endoscopic stenting of the bile ducts
b. Pancreatoduodenal resection
c. Hepatojejunostomy and gastrojejunostomy operation
d. Percutaneous transhepatic cholecystostomy
e. Endoscopic retrograde cholangiography and endoscopic stenting of the bile ducts. After 3-4 weeks pancreatoduodenal resection

A 44-year-old woman presents with a recurrent incisional hernia and has had multiple bowel obstructions in the past. She has not had obstructive symptoms recently, and her last hospitalization for bowel obstruction was two years ago. On abdominal CT, multiple small ventral hernias are evident, the largest 5 cm in diameter. She is a current smoker (1/2 pack/day) with a BMI of 39. She has type II diabetes mellitus. Which of the following is most appropriate for this patient? Select one:

a. Perform an open ventral hernia repair with biologic mesh and transversus abdominus release
b. Repair with total autologous component separation
c. Perform a laparoscopic repair with synthetic mesh
d. Watchful waiting to optimize his medical co-morbidities with weight loss, diabetes management, and smoking cessation

currently has no acute obstruction or strangulation.

72 year-old patient is admitted to the hospital due to a brain stem tumour. Arterial blood gas analysis reveal pH 7.47, PaO2 94 mm Hg, PaCO2 28 mmHg, bicarbonate 22 mmol/l, Na 138 mmol/l, K 3.9 mmol/l. Which disorder is the patient having? Select one:

a. compensated respiratory acidosis
b. compensated metabolic alkalosis
c. hypokalemia
d. hypernatremia
e. uncompensated respiratory alkalosis

The brainstem helps regulate breathing. If irritated/compressed, it can cause hyperventilation, blowing off $CO_2$.

pH alkalemia
low CO2 relative to O2

8 weeks Primigravida came to you with nausea & vomiting, choose the statement that guide you to hyperemesis gravidarm: Select one:

a. ECG evidence of hypokalemia
b. Ketonuria
c. Metabolic acidosis
d. Elevated liver enzyme
e. Jaundice

Hyperemesis gravidarum is severe vomiting in pregnancy that causes dehydration, starvation, and weight loss.

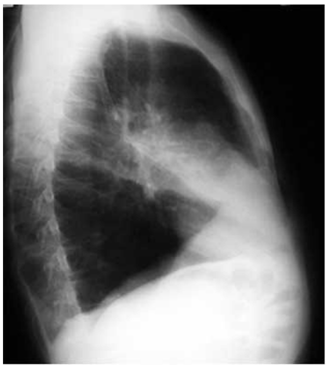
The classic clue that separates it from normal morning sickness is ketonuria, because the patient is starving and breaking down fat for energy.

6 y.o boy was playing in the park, when abruptly lost consciousness. You find him unconscious, no breathing, no central pulse. What would you do in this situation?
Select one:

a. Call for help, open airway, 2 rescue breaths, chest compressions, continue chest compressions and breaths with rate 30:2, phone call for emergency after 1 minute of resuscitation, 2 min of resuscitation, check for breathing and pulse
b. Call for help, 15 chest compressions, open airway, 5 rescue breaths, continue chest compressions and breaths with rate 15:2, phone call for emergency after 1 minute of resuscitation, 2 min of resuscitation, check for breathing and pulse
c. Call for help, open airway, 5 rescue breaths, chest compressions, continue chest compressions and breaths with rate 15:2, phone call for emergency after 1 minute of resuscitation, 2 min of resuscitation, check for breathing and pulse
d. Run away
e. Phone call for emergency, open airway, 5 rescue breaths, chest compressions, continue chest compressions and breaths with rate 15:2, 2 min of resuscitation, check for breathing and pulse

Lobar pneumonia causes the lung to fill with inflammatory fluid and become “solid” (consolidation). Consolidated lung transmits sound poorly to percussion, so you get dullness, and the affected lung moves less during breathing → decreased diaphragmatic excursion.

This 45 year old man has had severe dyspnoe, high fever (38.8°C) and a painful cough for three days. He is denies smoking and previous lung diseases. X-ray shows right middle lobe pneumonia (massive consolidation). What findings might you find on PERCUSSION?



Select one or more:

a. Increased diaphragmatic excursion on the right
b. Decreased diaphragmatic excursion on the right
c. Dullness to percussion right upper lung field
d. Dullness to percussion lower right anterior lung field
e. Hyperresonance to percussion lower right anterior lung field

This 45 year old man has had severe dyspnoe, high fever (38.8°C) and a painful cough for three days. He is denies smoking and previous lung diseases. X-ray shows right middle lobe pneumonia (massive consolidation). What changes might you find on INSPECTION?

Select one or more:

a. Chest movement may be limited in right side of chest
b. Clubbing
c. Could be tachypnea
d. Increased anteroposterior diametre of chest
e. Edema in leg

On inspection, you expect signs of increased work of breathing and reduced movement of the affected side.

This 45 year old man has had severe dyspnoe, high fever (38.8°C) and a painful cough for three days. He is denies smoking and previous lung diseases. X-ray shows right middle lobe pneumonia (massive consolidation). What changes might you find on PALPATION?

Lobar pneumonia causes the alveoli to fill with inflammatory exudate, making the lung denser and better at transmitting vibrations. Therefore, you get increased tactile fremitus over the affected area and reduced chest expansion on that side.

Select one or more:

a. Decreased tactile (vocal) fremitus in the lower right anterior lung field
b. Chest expansion is limited in right lung field
c. Increased tactile (vocal) fremitus in the right upper lung field
d. Increased tactile (vocal) fremitus in the lower right anterior lung field
e. Decreased tactile fremitus in the right anterior lung field

This 45 year old man has had severe dyspnoe, high fever (38.8°C) and a painful cough for three days. He is denies smoking and previous lung diseases. X-ray shows right middle lobe pneumonia (massive consolidation). What findings might you find on AUSCULTATION?

Select one or more:

a. Bronchial breath sounds
b. Bronchophony is increased
c. Pleural rub could be heard
d. Bronchophony is decreased
e. Crackles (rales)

Lobar pneumonia turns normal air-filled lung into dense inflammatory tissue, which transmits sound much better. That’s why you hear bronchial breath sounds, increased bronchophony, crackles, and sometimes a pleural rub.

5-year-old female patient came with her mother. The mother noticed that a few weeks ago pink lesions began to appear on the skin of her daughter's abdomen and forearms, which she sometimes scratches and when pressed, she sometimes manages to squeeze out white "cheesy" masses. Objectively, single papules of 2-3 mm diameter with a depression in the center are visible on the skin of the patient's abdomen and forearms. What is the possible treatment?

a. Potassium hydroxide liquid
b. Local antibiotics
c. Antihistamines
d. Topical corticosteroids
e. Topical antifungal drugs

Molluscum contagiosum causes small pearly papules with a central dimple that can express a white “cheesy” material. Treatment often includes destruction of lesions, and potassium hydroxide solution is a classic option.

A 2-year-old child with purulent nasal discharge, fever and pain for 2 months. His fever is 38°C, and leucocyte count is 12000. X-ray of paranasal sinuses showed opacification of left ethmoidal air cells. The culture of the eye discharge was negative. Which of the following would be most useful further step in evaluation of this patient? Select one:

a. Urine culture
b. MRI scan
c. Blood culture
d. Repeat culture of the eye discharge
e. CT scan

This child likely has Ethmoid sinusitis with possible orbital involvement.
In complicated or persistent sinus disease, especially involving the ethmoid sinuses near the orbit and brain, the best next evaluation is a CT scan to assess the extent of infection and complications.

A 76-year-old woman was diagnosed with primary arterial hypertension. She has been taking diuretic and a calcium channel blocker. The family doctor found that blood pressure control is not sufficient, and an additional antihypertensive medication was prescribed. After two weeks, the patient's daughter arrived and told that the patient suffered a hip fracture, which occurred after a fall at home. At the same time, she noted that the blood pressure remains increased. What investigational steps you would recommend for this elderly patient? Select one or more:

a. Prescribe an additional antihypertensive medication
b. Assess bone mineral density
c. Perform routine laboratory tests
d. Perform a comprehensive geriatric assessment
e. Perform only the Mini-Mental State examination

A patient was admitted to intensive care unit with a diagnosis of pneumonia and acute respiratory distress syndrome. He is ventilated with pressure control mandatory ventilation (P-CMV): pressure limit (PC) = 20 cm$H_2O$, frequency – 12 /min, inspiratory oxygen fraction ($FiO_2$) = 0.5, positive end-expiratory pressure (PEEP) = 5 cm$H_2O$). Tidal volumes ($V_T$) are 700-800 ml. Arterial blood analysis: pH = 7.32, $PaO_2$ = 50 mmHg, $PaCO_2$ = 40 mmHg. $SaO_2$ = 86%. What the changes in ventilation settings could be done to correct arterial hypoxaemia? Select one or more:

a. Increase PEEP
b. Increase respiratory rate
c. Increase $FiO_2$
d. Decrease $FiO_2$
e. Increase PC limit

PEEP:
Positive end-expiratory pressure keeps alveoli open at end expiration.

In ARDS:

alveoli collapse/fill with fluid
PEEP recruits alveoli
improves V/Q matching
improves oxygenation

FiO2:
Increasing inspired oxygen concentration directly increases oxygen delivery to alveoli.

$PaO_2$ is dangerously low:

50 mmHg
$SaO_2$ 86%

So increasing $FiO_2$ is appropriate.

What is this disorder?
The patient is 65 years of age. She had a stroke three months ago. She was treated in hospital for a month, after which she continued her rehabilitation treatment for a month. The patient returned home with improved physical health, but the mood was sad, he was quickly agitated, often thought of death, had an poor appetite, weakened his cravings, and took an interest in those around him. For her, it started right after the stroke. The patient is normally oriented, has a good understanding of life events, no marked memory disorders are observed. Select one:

a. Organic personality disorder
b. Mild cognitive impairment
c. Organic depression
d. Sudden onset of vascular dementia
e. Generalized anxiety disorder

30 year-old woman was admitted due to regular contractions. The first pregnancy, 41 week of pregnancy, the low risk pregnancy. Maternal and fetal examination: the fetal lie – longitudinal, vertex presentation, cervical dilatation 9 cm, amniotic membranes are intact, occiput anterior presentation, +2 station, CTG – normal, contractions every 5 minutes (40 s duration), amniotic fluid index normal, estimated fetal weight 3500 g, maternal pulse 80 bpm, BP 120/70 mmHg. How should she be managed? Select one or more:

a. Intermittent CTG
b. Amniotomy
c. Amniotomy and labour augmentation with oxytocin
d. Admission to the labour room
e. Continuous CTG

Amniotomy (artificial rupture of membranes) can help:
strengthen contractions
accelerate labor progression

This is a healthy low-risk woman in advanced active labor with reassuring fetal status and nearly complete dilation (9 cm). Management should focus on normal labor support: admit her to the labor room, continue fetal monitoring appropriately for low-risk labor, and perform amniotomy to help labor progress.

38 years old male admitted to the emergency room with severe right flank pain. An hour before he felt down from 2.5 m height platform and receive blunt trauma of right body side. Suddenly after trauma hematuria appeared. In emergency room, pain remains very intensive. Physical examination: right flank subcutaneous haematoma, blood pressure 110/65 mmHg, pulse 96 b/min. Sonoscopy: There is no hydronephrosis. Around right kidney detected 10 cm size haematoma. What further investigation we need? Select one:

a. Magnetic resonance scan
b. Cystoscopy
c. Plain X-Ray (KUB)
d. Excretory pyelogram
e. Contrast CT (CT urography)

A 3-year-old boy was admitted to ER. Yesterday he was feeling sick, vomitted, had fever, diarhhea, complained of stomach pain. On examination: T-38.8C, refuses to drink any liquids. Your preliminary diagnosis – Acute gastroenteritis. Hypovolemia, dehidration. pH 7,35, pCO2 25 mmHg, HCO3 18 mmol/l. How would you name this acid-base state and its cause? Select one:

a. Compensated metabolic acidosis and respiratory acidosis due to loss of HCO3 diarrhea and hypoventilation
b. Compensated metabolic acidosis and compensatory respiratory alkalosis due to loss of HCO3 diarrhea
c. Decompensated metabolic acidosis with compensatory respiratory alkalosis due to hypovolemia caused lactic acid accumulation in blood
d. Acid-base state is normal because pH is more than 7,3
e. Compensated respiratory alkalosis with compensatory metabolic acidosis, hyperventilation due to fever and hypovolemic state

Acute gastroenteritis with diarrhea causes loss of bicarbonate, producing metabolic acidosis. The child compensates by hyperventilating, lowering $CO_2$ → compensatory respiratory alkalosis.

pH = 7.35 → near normal, but slightly acidic
$HCO_3^-$ = 18 low (22-26 normal) → metabolic acidosis
$pCO_2$ = 25 low (35-45 normal) → respiratory compensation by hyperventilation

We know there is respiratory alkalosis because the $pCO_2$ is LOW (25 mmHg), meaning the child is blowing off too much $CO_2$ through hyperventilation.

32 year-old woman was admitted due to regular contractions. The first pregnancy, 40 weeks of pregnancy, BGS positive. Maternal and fetal examination: the fetal lie – longitudinal, vertex presentation, cervical dilatation 4 cm, amniotic membranes are intact, occiput anterior presentation, 0 station, CTG – normal, contractions every 5 minutes (30 s duration), amniotic fluid index normal, estimated fetal weight 3500 g, maternal pulse 80 bpm, BP 120/70 mmHg. How should she be managed? Select one or more:

a. Intermittent CTG
b. Amniotomy and labour augmentation with oxytocing
c. Admission to the labour room
d. Antibiotics for BGS prophylaxis
e. Continuous CTG

9 months boy was admitted to the hospital due to the inadequate weight gain from 7 months. He has bowel movements 1-2 times per day with foul odor stools. He has no nausea, vomiting, appetite slightly decreased. Body weight <3 percentile, height 25 percentile. Slight atopic dermatitis on face from 3 months of age without deterioration. At 4 month had rotavirus diarrhea. Breastfeeding till 3 mo., later cow's milk formula. From 5,5 mo. started to eat vegetables porridge, from 6 mo. wheat, rye, maize porridge and from 7 mo. meat. Full blood count: Hb-108g/l, erythrocytes - 4.0x1012/l, leukocytes - 8x109/l, eosinophils - 7%, neutrophils - 35%, lymphocytes - 51%, ESR – 16 mm/h. What disease could be suspected? Select one:

a. Coeliac disease
b. Lactose intolerance
c. Post infectious syndrome
d. Eosinophilic enteritis
e. Giardiasis

Celiac disease is the classic cause of failure to thrive, foul-smelling stools, and malabsorption beginning after gluten introduction. This infant became symptomatic shortly after starting wheat/rye porridge, making celiac disease the best answer.

21-year-old man noted that without any apparent reason he developed polyuria and thirst. Although the appetite was good, his body weight decreased progressively. Later he developed weakness, nausea, vomiting and abdominal pain. What disease should be suspected? Select one:

a. Bacterial gastroenteritis
b. Acute adrenal insufficiency
c. Type 1 diabetes mellitus
d. Acute kidney insufficiency
e. Diabetes insipidus

A 5-year-old boy suffering from pneumonia was diagnosed with short PR interval on the ECG. He had no previous tachycardia episodes. Mom claims him being a very active and social boy. On examination: no cardiac pathology. What is your further tactic for diagnostics and treatment? Select one:

a. Cardiologist's consultation, heart ultrasound, 12-leads electrocardiogram, follow-up by cardiologists 2 times a year
b. Admission to cardiosurgery ward for destruction of additional Kent fibbers'
c. Cardiologist consultation
d. 24-hour ECG, heart ultrasound, antiarrhythmic treatment until additional pathway fibbers' destruction will be eventual
e. 24-hour ECG

A 5-year-old boy was noticed with right eye enlargement, extrophy. 3 weeks later parents noticed him drinking loads of water and urinating more often (up to 5 l/day) than usually. On examination you detect exophthalmus, multiple sites of osteolysis on craniogram. Blood tests: leucocytosis, anemia, thrombocytosis, ESR 48mm/h. Other tests showed no changes. What is your preliminary diagnosis and stage? Select one:

a. Langerhan's cell histiocytosis, generalised stage.
b. Langerhans' cell histiocytosis, B stage
c. lymphoma with intracranial involvement
d. Diabetes insipidus advanced stage
e. Tumor of the orbit, II stage

Langerhans cell histiocytosis classically causes the triad of lytic skull lesions, exophthalmos, and diabetes insipidus. This child has multisystem involvement (bone + pituitary),
which indicates a disseminated form, B stage.

a rare disorder characterized by the clonal proliferation of pathologic Langerhans cells, a type of dendritic immune cell

A 56-year-old G3P2 presents with postmenopausal bleeding. Transvaginal ultrasound reveals a 12-mm endometrial stripe and an 80-mm complex left adnexal mass. An endometrial biopsy reveals endometrial hyperplasia. What is the most likely diagnosis in this patient? Select one:

a. Endometrioma
b. Mucinous cystadenocarcinoma
c. Granulosa-theca cell tumor
d. Benign teratomas
e. Choriocarcinoma

Postmenopausal bleeding ⭐
Thickened endometrium (12 mm stripe) ⭐
Endometrial hyperplasia ⭐
Ovarian/adnexal mass ⭐

Think:
"Estrogen-producing ovarian tumor"

The classic ovarian tumor that secretes estrogen:
➡️ granulosa cell tumor.

The breech presentation was diagnosed for a 20-year-old healthy woman at 37 weeks of gestation (first pregnancy, first delivery). The uterus malformation (a unicornuate uterus) was diagnosed before pregnancy. The ultrasound exam – placenta location anterior wall, amniotic fluid index – 9,8 cm, the estimated fetal weight 4030 g. How should she be managed? Select one:

a. external fetal version at 37-38 weeks of preganancy in the hospital
b. caesarean delivery at 39 week of pregnancy
c. caesarean delivery at 40 week of pregnancy
d. external fetal version at 40 weeks of pregnancy in the hospital
e. external fetal version at 37-38 weeks of pregnancy in out-patient clinic

This patient has multiple contraindications to vaginal breech delivery and to external cephalic version: a Unicornuate uterus and suspected macrosomia (4030 g). Therefore, the safest management is planned cesarean delivery at 39 weeks.

The breech presentation was diagnosed for a 20-year-old healthy woman at 37 weeks of gestation (first pregnancy, first delivery). The ultrasound exam – placenta location posterior wall, amniotic fluid index – 16,8 cm, the estimated fetal weight 2630 g. How should she be managed? Select one:

a. external fetal version at 37-38 weeks of pregnancy in out-patient clinic
b. external fetal version at 37-38 weeks of preganancy in the hospital
c. caesarean delivery at 39 week of pregnancy
d. external fetal version at 40 weeks of pregnancy in the hospital
e. caesarean delivery at 40 week of pregnancy

favorable conditions for External cephalic version: normal fluid, normal-sized fetus,
no uterine anomaly, and reassuring placental location.

A 31 year old man complaints puffiness around his eyes, poor ability to tolerate cold, a feeling of tiredness, constipation, weight gain about 7 kg, numbness, tingling, and pain in his left wrist. He reports experiencing a depressed mood during the past year. He was diagnosed with celiac disease as an adolescent and carpal tunnel syndrome some months ago. On physical examination, his blood pressure is noted to be 130/100 mm Hg, and his heart rate is 55 beats per minute. Blood biochemistry shows marked hypercholesterolemia and hypoalbuminemia. What are the following diagnoses? Select one or more:

a. Heart failure
b. Vit. B12 deficiency
c. Nephrotic syndrome
d. Hypothyroidism
e. T-cell lymphomas

This patient has classic Hypothyroidism: cold intolerance, weight gain, bradycardia, constipation, depression, puffiness, hypercholesterolemia, and carpal tunnel syndrome.

The hypoalbuminemia strongly suggests an additional diagnosis of Nephrotic syndrome.

32 year-old woman was admitted to the hospital due to headache. 32 weeks of gestation, first pregnancy, the headache started 4 hours ago, she had taken a tablet of paracetamol 3 hours ago. Last time she went urinate 6 hours ago. Maternal examination – pulse 90 bpm, BP 160/110 mmHg, peripheral edema. The fundus of the uterus 25 cm, fetal lie – longitudinal, vertex presentation. Vaginal examination – vaginal discharges normal, cervix external os closed. Ultrasound examination – estimated fetal weight – 850 g (less 5 percentile for gestational age), amniotic fluid index normal, cervical length – 30 mm. NST – reactive. How should she be managed? Select one or more:

a. Blood analyses
b. Urine analyses
c. Admission to the hospital, maternal and fetal monitoring
d. Urine output measurement (A Foley catheter)
e. Antihypertensive drugs

This pregnant woman has severe Preeclampsia: BP 160/110, headache, edema, oliguria, and severe fetal growth restriction. She requires urgent inpatient management with maternal/fetal monitoring, labs, urine assessment, strict urine output monitoring, and antihypertensive treatment.

A 26-year-old G1 presents to your office for prenatal care at 12 weeks' gestation. She denies any past medical or surgical history, but does report smoking 1 pack of cigarettes every 2–3 days. Which of the following statements regarding her tobacco use in pregnancy will you discuss with the patient? Select one:

a. Smoking increases the risk of placental abruption
b. All of the mentioned
c. Smoking cessation at any stage of pregnancy can improve perinatal outcomes
d. Smoking increases the risk of preterm birth

A 22-year-old male had several episodes of loss of consciousness. At first, he feels the situation has already been experienced before, then he does not remember anything. His girlfriend reports that during the episode, he is unresponsive, smacks with his lips for several minutes, performs purposeless movements with his hands, but there is no stiffening or twitching of muscles. Then he slowly recovers. Name the type of seizures. Select one:

a. Focal seizures with loss of awareness.
b. Absence seizure.
c. Focal seizures without loss of awareness
d. Psychogenic non-epileptic seizures.
e. Generalized tonic-clonic seizures.

Prenatally male fetus was diagnosed with bilateral hydnonephrosis, oligohydroamnion was found. Postnatal ultrasonography showed bilateral hydronephrosis, ureteric diameters 1 and 2cm, bladder wall thickening. Serum creatinine was 90 mkmol/l. On examination, no external abnormalities were found. What is the most appropriate diagnosis? Select one:

a. Urethral valves
b. Ureterocele
c. Bladder exstrophy

Classic posterior urethral valve clues:
👶 Male infant ⭐
💧 Bilateral hydronephrosis ⭐
🧪 Elevated creatinine
🫙 Thick-walled bladder ⭐
🌊 Oligohydramnios prenatally ⭐

Think:
"Urine can't get out → backs up everywhere."

A 63-year-old G4P4 woman presents to your ofice with a chief complaint of vaginal spotting. She reports an isolated episode 1 week prior to presentation that consisted of scant vaginal bleeding. She denies any associated symptoms including pelvic pain, pressure, or early satiety. She also denies any family history of gynecologic malignancy. Her past medical history is signifcant for morbid obesity, hypertension, and inflammatory bowel disease. Which of these diagnoses are likely choice to keep in your differential? Select one or more:

a. Cervical polyp
b. Endometrial polyp
c. Endometrial cancer
d. Adenomyosis
e. Atrophic endometrium

Any Postmenopausal bleeding must be considered endometrial cancer until proven otherwise. Common causes in the differential include atrophic endometrium, endometrial polyps, cervical polyps, and endometrial cancer.

A three month old infant is breastfeeding. Since the age of two months blood-streaked stools were noted. There were no other symptoms, the gain of weight – normal. Peripheral blood eosinophilia: 11%. Total serum IgE – normal. Stool: bacterial and viral testing was negative. Select one or more:

a. Preliminary diagnosis: food protein-induced proctitis
b. Preliminary diagnosis: allergic eosinophilic gastroenterocolitis
c. Preliminary diagnosis: food protein-induced enterocolitis
d. It is necessary to stop breastfeeding as soon as possible
e. Elimination diet to mother is necessary (after the detection of food allergens)

You admit a 2-year-old boy. His motor development was late from the beginning – he started sitting at the age of 12 months, stood up at 20 months. On examination: instability in walking, low muscle tone, mild symmetric reflexes, impaired coordination and balance. Brain MRT showed congenital hypoplasia of cerebellum. What diagnosis would you suggest? Select one:

a. Spastic cerebral palsy.
b. Duchenne muscular dystrophy.
c. West syndrome.
d. Cerebellitis.
e. Ataxic cerebral palsy.

"Cerebellum problem → ataxia + hypotonia."

Pregnant woman, 10 weeks of gestational age came to you with IUD (intrauterine device) inserted and the string is out from cervical canal and are visible in vagina, what is the most important measure: Select one:

a. Do laparoscopy to see if there is ectopic pregnancy
b. Leave the IUCD and give antibiotics
c. Reassuring the patient, because it doesn't matter
d. Leave the IUD
e. Send to Gynecologist to remove IUD

An 18-year-old nulligravid woman presents to the student health clinic with a 4-week history of yellow vaginal discharge. She also reports vulvar itching and irritation. She is sexually active and mo- nogamous with her boyfriend. They use condoms inconsistently. On physical examination, she is found to be nontoxic and afebrile. On genitourinary examination, vulvar and vaginal erythema is noted along with a yellow, frothy, malodorous discharge with a pH of 6.5. The cervix appears to have erythematous punctuations. There is no cervical, uterine, or adnexal tenderness. The addition of 10% KOH to the vaginal discharge does not produce an amine odor. Wet prep microscopic examination of the vaginal swabs is performed. Which of the following is the most likely causal organism? Select one:

a. Gardnerella vaginalis
b. Haemophilus ducreyi
c. Neisseria gonorrhoeae
d. Trichomonas vaginalis
e. Treponema pallidum

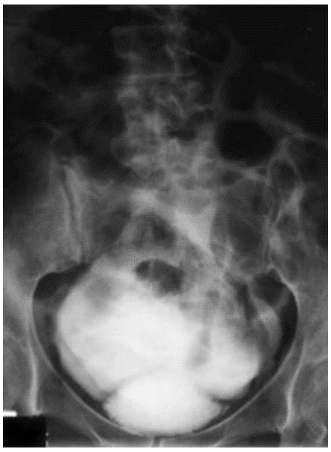
This is the classic presentation of Trichomoniasis caused by Trichomonas vaginalis. The key clues are frothy malodorous discharge, high vaginal pH, vulvar irritation, and strawberry cervix.

A 8-years-old boy is suffering from Type-1 diabetes for 2 years now. He developed seizures for the first time after having meat for dinner. 2 hours before meal he was playing football. Glucose level before meal was 4.5mmol/l, and injected 2IU of fast acting insulin. What is the most probable cause of seizures? Select one:

a. Hypocalcaemia
b. Hypernatraemia
c. Epilepsy
d. Diabetic acidosis
e. Hypoglycaemia

This child most likely had Hypoglycemia causing seizures.
Exercise (football), relatively low pre-meal glucose (4.5 mmol/L), delayed eating, and fast-acting insulin together created the perfect setup for low blood sugar.

45 years old patient admitted to the urgencies after traffic accident. There is urgent abdominal pain in lower part. Patient complains, that is impossible to urinate since trauma. On physical examination revealed haematoma in suprapubic region. Plain x-ray of pelvis: there are no bone fractures. Abdominal sonoscopy: some free fluid in abdominal cavity. Cystogram with contrast:



What diagnosis you propose: Select one:

a. Acute urinary retention;
b. Urethral rupture;
c. Rupture of urinary bladder
d. Anuria.
e. Kidney rupture

A 25-year-old was assaulted and is Glasgow Coma Scale 13 (E3M6V4) at the scene. On examination there is significant bruising to the right side of his head with a 4-cm laceration and does not appear to have any focal neurological deficit. He is awaiting a CT scan when you are told he is less responsive. On examination, he is GCS 8 (E2M4V3), his right pupil is dilated and on application of painful stimulus appears to be moving his left side only. Which one of the following is most likely to be responsible for these findings? Select one:

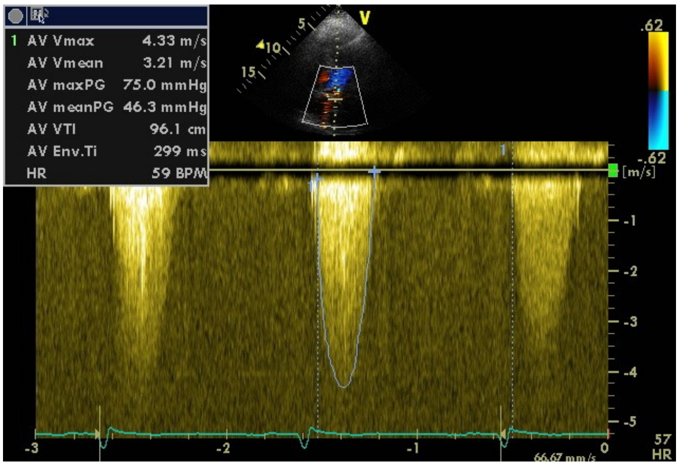
a. Tonsillar herniation through the foramen magnum.
b. Unilateral uncal herniation.
c. Subfalcine herniation.
d. Ascending transtentorial herniation.
e. Transalar (transsphenoidal) herniation.

This patient has classic Uncal herniation from an expanding intracranial hematoma.
The hallmark findings are ipsilateral blown pupil + declining consciousness + contralateral weakness.
Uncal herniation —> compresses CNIII (ipsilateral dilated pupil)

74 years old male patient was brought to emergency room. He has stridor, painful swallowing, trismus and painful tender area in the left side of the neck. He had tonsillitis for one week and only took Paracetamol for the pain and fever. On the examination you see left tonsil pushed to the midline, during laryngoscopy you see left wall of the pharynx medialized. On palpation you feel tender and red side of the neck starting from the angle of the mandible. Blood test shows leukocytosis and CRP is 260. You suspect peritonsillar abscess which spread to the parapharyngeal space. Which investigation method would be most suitable for parapharyngeal abscess diagnosis confirmation ? Select one:

a. Ultrasonography
b. CT with contrast
c. PET-CT
d. MRI
e. Xray

An 82-years-old retired solicitor presents to the Emergency department with chest pain radiating to his jaw. He has hypertension treated with ramipril 5 mg bid (ACE inhibitor) but is otherwise normally fit and well. His admission ECG shows sinus rhythm with ventricular rate of 57 bpm, LV hypertension, and widespread ST segment depression. His peak troponin is 110 ng/l (normal <30 ng/l). He is started on treatment for an acute coronary syndrome and listed for an inpatient angiogram. You are asked to perform bedside echocardiogram as a systolic murmur is heard on the post-take ward round. His aortic valve is heavy calcified, maximal transaortic jet velocity is 4.3 m/s, peak transaortic gradient is 75 mmHg, mean transaortic gradient is 46 mmHg (Figure below).

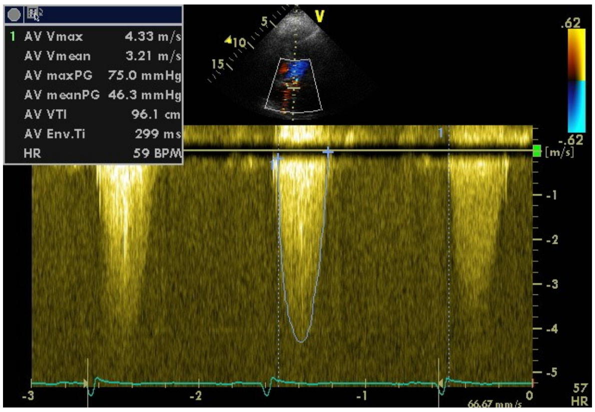

1 AV Vmax 4.33 m/s
AV Vmean 3.21 m/s
AV maxPG 75.0 mmHg
AV meanPG 46.3 mmHg
AV VTI 96.1 cm
AV Env.Ti 299 ms
HR 59 BPM
V
5
10
15
.62
-.62
[m/s]
-1
-2
-3
-4
-5
57
HR
-3
-2
-1
0
66.67 mm/s

This patient has symptomatic severe Aortic stenosis PLUS an acute coronary syndrome (elevated troponin + ST depression). Before valve replacement, he needs an invasive coronary angiogram to define coronary artery disease and guide combined management.

What is the next appropriate step in the management of the patient? Select one:

a. Invasive coronary angiogram only
b. CT coronary angiogram
c. Surgical/transcatheter aortic valve replacement without coronary angiogram
d. Stress echocardiography
e. Invasive coronary angiogram before surgical/transcatheter aortic valve replacement

An 82-years-old retired solicitor presents to the Emergency department with chest pain radiating to his jaw. He has hypertension treated with ramipril (ACE inhibitor) 5 mg bid, but is otherwise normally fit and well. His admission ECG shows sinus rhythm with ventricular rate of 57 bpm, LV hypertension, and widespread ST segment depression. His peak troponin is 110 ng/l (normal <30 ng/l). He is started on treatment for an acute coronary syndrome and listed for an inpatient angiogram. You are asked to perform bedside echocardiogram as a systolic murmur is heard on the post-take ward round. His aortic valve is heavy calcified, maximal transaortic jet velocity is 4.3 m/s, peak transaortic gradient is 75 mmHg, mean transaortic gradient is 46 mmHg (Figure below). What is the most likely diagnosis? Select one:


1 AV Vmax 4.33 m/s
AV Vmean 3.21 m/s
AV maxPG 75.0 mmHg
AV meanPG 46.3 mmHg
AV VTI 96.1 cm
AV Env.Ti 299 ms
HR 59 BPM
V
5
10
15
.62
-.62
[m/s]
-1
-2
-3
-4
-5
57
HR
-3
-2
-1
0
66.67 mm/s

a. Severe aortic regurgitation
b. None of the above
c. Moderate aortic stenosis
d. Severe mitral regurgitation
e. Severe symptomatic aortic stenosis

This patient has classic Severe aortic stenosis with symptoms (chest pain) and echo criteria showing severe obstruction. The very high transaortic velocity and gradients confirm the diagnosis.

A 65-year old male underwent coronary artery bypass grafting operation a year ago. For severe chronic Kidney Failure patient is on a Renal Replacement Therapy (dialysis). A two months ago patient developed Fever with body temperature at 38, 4°C and Shortness of Breath on minimal physical exertion. Patient underwent a Transoesophageal Echocardiography, a severe Aortic Regurgitation with vegetation over 1 cm in diameter was established. Blood cultures were positive for *S. aureus*. Patient has received an adequate medical treatment for the Heart Failure and Antibiotics for the period of two weeks. On repeat Transoesophageal Echocardiography, a severe Aortic Regurgitation was remaining. What would be a correct treatment strategy? Select one or more:

a. Antibacterial treatment as per blood culture results should be continued at least for six weeks
b. As the patient was already operated for the Coronary Artery Disease, a redo surgery is not possible; patient has to remain on Medical Treatment
c. Surgical treatment for the severe Aortic Regurgitation is not performed
d. Aortic Valve Replacement is contraindicated due to need of Renal Replacement Therapy
e. Aortic Valve Replacement is indicated, accepting an increased operative risk

This patient has Infective endocarditis with a large vegetation, persistent severe aortic regurgitation, and heart failure symptoms despite antibiotics. He needs prolonged IV antibiotics AND surgical Aortic valve replacement despite his high operative risk.

Pregnant lady 20 weeks with Chlamydia infection, treatment: Select one:

a. Metronidazole
b. Gentamycin
c. Doxycycline
d. Erythromycin
e. Azithromycin

Pregnant? ❌ No doxycycline
Preferred drug? ✅ Azithromycin

A 22-year-old woman performed her prenatal analyses. The gestational age 10 weeks, the first pregnancy. The blood analysis: WBC – 10,4 x10 $^9$/l, HGB – 105 g/l, PLT – 200 x10$^9$/l. The other prenatal tests – normal. Define the next steps of her management due to this result? Select one or more:

a. Feritin level blood test
b. Iron supplementation
c. Only prenatal vitamins
d. Repeat blood test after 2 weeks of iron supplementation
e. Repeat blood test after 2 weeks of vitamins supplementation

This pregnant woman has mild Anemia in pregnancy at 10 weeks (Hb 105 g/L).
In early pregnancy, this is most likely iron deficiency anemia, so the next steps are to confirm iron deficiency with ferritin testing and start iron supplementation.

Patient developed severe hypotension after standard anesthesia induction with propofol 2mg/kg. Which of the following are correct choices to restore blood pressure? Select one or more:

a. Vasodilatators (sodium nitroprusside)
b. Add ketamine IV
c. Head up, reverse Trendelenburg position
d. Sympathomimetic drugs (ephedrine IV)
e. IV fluids administration

Propofol commonly causes hypotension because it produces vasodilation and myocardial depression. To restore blood pressure, you increase vascular tone and preload using IV fluids and sympathomimetics.

A 5-year-old boy had a surgery due to suspected intussusception, during surgery a tumor of 8x7 cm was found in right ileocecal region, infiltrating intestinal wall, MTS of intestinal lymph nodes of 2-3 cm diameter were found. Histology showed Burkitt lymphoma. Blood tests showed no changes, bone marrows with no MTS, CSF normal. LDH 500U/l. Name disease stage and risk group. Select one:

a. I stage, standard risk
b. I-II stage, low risk
c. III stage, moderate risk
d. IV stage, moderate risk
e. II stage, high risk

Stage II includes:
a single GI tumor with regional lymph node involvement

This patient has:

one primary intestinal lesion
regional mesenteric/intestinal nodes

BUT:
❌ no distant disease
❌ no marrow involvement
❌ no CNS involvement

Therefore:
➡️ Stage II.

22 y.o male came to general practitioner for blood tests. While nurse was taking blood, he felt bad, his skin turned white, he started sweating and he lost his consciousness. When he was laid down on the bed, he felt better. Which type of syncope do you suspect? Select one:

a. Carotid sinus syndrome
b. This was not syncope
c. Younger people syncope
d. Reflex syncope
e. Cardiogenic syncope

A drowning person is unconscious and is not breathing. He has been under water for up to 2 min. Which action of resuscitation must be perform first ? Select one:

a. Hit the chest, then start the compressions
b. Call 112 for help
c. Turning it on the site, pressing the abdomen several times
d. Start chest compressions
e. Administer two rescue breaths

A 40-year-old patient complained of fever, headache and disorientation. These symptoms occurred 3 days ago. She returned from India ten days ago. Before or during the trip she did not use malaria chemoprophylaxis. She presented with the signs of inter-nuclear ophthalmoplegia, asymmetry of tendon reflexes, Babinsky symptoms on both sides, slightly pronounced meningeal symptoms? What kind of preliminary diagnosis would you suspect? Select one or more:

a. Typhoid fever
b. Enterovirus meningoencephalitis
c. Viral encephalitis
d. Botulism
e. Meningococcal meningitis

This patient has fever, headache, altered mental status, and focal neurologic deficits, which strongly suggest Viral encephalitis. The focal CNS findings (Babinski signs, ophthalmoplegia, asymmetric reflexes) point to encephalitis rather than pure meningitis.

45 year-old woman complains of the pain in small joints of the hands and wrists and morning stiffness lasting for about one hour. The symptoms continue for about 6 months. On examination: painful and swollen both wrists, II-IV MCP joints of both hands and isolated proximal interphalangeal joints. Which of these laboratory tests should be performed to the patient? Select one or more:

a. RF and anti-CCP
b. ANCA
c. Genotyping (HLA-DR alleles search)
d. ESR and CRP
e. Creatine kinase levels in the blood

This is classic Rheumatoid arthritis: symmetric small-joint pain, MCP/wrist involvement, and prolonged morning stiffness.
The key labs are inflammatory markers and RA-specific antibodies.

In which of these situations is the defense mechanism Sublimation: Select one:

a. Emma is always coming late for work because she has been out and partying. But Oscar is never saying anything about it because he is pretending that it is cool and everything is fine
b. Thomas had a complicated relationship with his ex-girlfriend and recently went through a rough breakup. He deals with his sexual frustration and feelings of emotional distress through writing songs every day
c. Robert used to blame the government that taking too high taxes, the politicians are corrupt and liars, his workers are too lazy and not working effectively
d. Johana is an employee of a famous textile company. She has been working there for quite some years and is a very dedicated worker. She knows she deserves a raise for all the extra hours and hard work she puts in, yet she is afraid to confront her boss about it.

Sublimation means transforming emotional or sexual tension into productive or creative behavior.
Writing songs to cope with breakup-related distress is a classic example.

A 22-year-old primigravida is considering epidural analgesia during labor and inquires if undergoing epidural placement will affect her labor. Which of the following statements is most accurate?
Select one:

a. Epidural use may increase her need for oxytocin
b. Epidural use may increase her chance of operative delivery
c. Epidural use may prolong her labor
d. All of the mentioned

How to check the breathing? Which statements are true? Select one or more:

a. Place your cheek near the victims mouth. Look (chest movements), listen (breathing sounds) and feel (breathing flow) for breathing
b. Place hand on victims forehead and tilt the head back; tilt the chin with another hands fingertips to open airways
c. Put your smartphone near the victims mouth. If screen has clouded over it meens that breathing is normal
d. There is normal breathing if you can hear any breathing sound
e. Place your palms on victims chest; breathing is normal if you feel some chest movements

An 18-year-old G0 young woman presents to your office for routine gynecologic examination. She reports that her last menstrual period began about 23 days ago. It was light in flow, and lasted 4 days in length. She has minimal dysmenorrhea. She denies any history of sexually transmitted infections, and has been sexually active with two male partners in the last 2 weeks. She was given a prescription for oral contraceptives 3 months ago; however, she has not started taking these. She has no other complaints or medical/surgical history. During her pelvic examination, you obtain a wet prep, which has normal squamous cells, rare WBCs, and no yeast. On bimanual examination, you palpate a 6 cm nontender left adnexal mass that is mobile. She has no rebound tenderness or guarding. You suspect that she has an ovarian cyst. Which of the following is the most common diagnosis in a patient with this presentation? Select one:

a. Functional ovarian cyst
b. Ectopic pregnancy
c. Endometrioma
d. Tubo-ovarian abscess
e. Theca lutein cyst

A 22-year-old primigravida presents in active labor at 5 cm and -2 station, 2 hours later she is 8 cm dilated and the fetal head is noted to be at 0 station. After three more hours she is completely dilated and the head is at +5 station. Which of the following is true?
Select one:

a. The caput is now 5 cm distal to the midpelvic interspinous diameter
b. The caput may be visualized at the level of the introitus
c. The fetal head has most likely internally rotated into an occiput anterior presentation(alina)
d. All of the mentioned

13-year-old girl complains of constant stomach pain, vomited twice, had liquid stool and fever of 38C. She was admitted to the ER on the 3rd day of her disease. On examination, you detect painful right lower part of the abdomen, painful formation in the suprapubic area. On ultrasound you detect periappendicular bowel infiltrate (mass without abscess). What tactic do you choose?
Select one:

a. Laparoscopic appendectomy
b. Conservative treatment (antibacterial therapy)
c. Open appendectomy

This patient likely has Appendiceal phlegmon — a contained inflammatory mass that forms several days after appendicitis. When there is an infiltrate/phlegmon WITHOUT abscess, the preferred treatment is usually conservative antibiotics rather than immediate surgery.

14 yrs old boy was admitted to the hospital due to growth failure (height < 3 percentiles, weight/height – 3 percentiles), pubertal delay. He has abdominal pain mostly in the umbilical region for several years unrelated to meal. He has bowel movements 3x/d, stools uniform (Bristol scale 5), without blood or mucus. T° - 37,8 – 1 mo. Full blood count: leukocytes 13,3x109/l, platelets – 500x109/l, neutrophils – 65%, eosinophils - 10%, ESR – 25mm/h. Stool microscopic investigation – erythrocytes - 10-20 per high power field. What you should suspect (one correct answer)? Select one:

a. Irritable bowel syndrome
b. Crohn’s disease
c. Ulcerative colitis
d. Eosinophilic enterocolitis
e. Coeliac disease

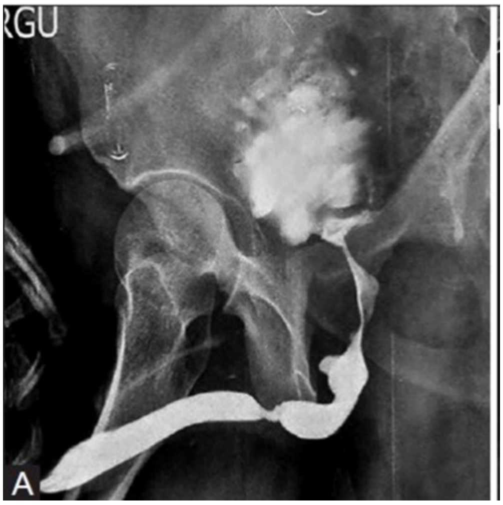
This boy most likely has Crohn's disease. The strongest clues are growth failure, delayed puberty, chronic abdominal pain, inflammatory markers, and occult blood in stool — all classic for pediatric Crohn disease.

A patient has been diagnosed with triple vessel coronary artery disease. 5 years ago he had left leg removal of varicose veins. On inspection the superficial veins of the right leg appear dilated with severe varicosities. Which conduit options for coronary grafts are feasible to this patient? Select one or more:

a. The Left External Carotid Artery should be harvested for the graft
b. The Right Internal Mammary Artery (RIMA) and Radial Artery (RA) can be used
c. Coronary Artery Bypass Graft (CABG) surgery is not possible due to the lack of conduits; the only option is medical therapy
d. The Left Internal Mammary Artery (LIMA) can be used
e. The Left External Femoral Artery (LRA) should be harvested for the graft

L + R Mammary, + Radial

Male, 40 years old, complains the weak stream on urination. Symptoms appeared 1 year ago, after discharge from hospital. A year ago patient underwent gastric cancer surgical treatment and spent several days in ICU with multiple catheterizations of urinary bladder. Catheter removed from urethra after purulent discharge along catheter appeared. After 4 month: Sonoscopy: 100ml residual urine Uroflowmetry: 4 ml/sec peak flow Urethrogramm:



What diagnosis do you prefer: Select one:

a. Benign prostatic hyperplasia
b. Urethral stricture after previous catheterization
c. Severe urethritis
d. Urethral stone.
e. Chronic prostatitis

Catheter trauma/infection can injure the urethral mucosa.
Healing causes:
fibrosis/scarring
narrowing of urethral lumen

A 5-months-old baby has had febrile fever since yesterday. He lost apetite, vommited 3 times/ day, had loose stool once. On examination: sleepy, irritable with cold extremities, pale. HR 186/min, RR 55/min, ABP 84/46mmHg. Which syndrome is predominant and what are your following actions? Select one:

a. Fluid-electrolyte disbalance. Venous access, physiological fluid demand + 25 % dehydration, intravenous fluids 10ml/kg/hour for first 6 hours, then 4ml/kg/hour.
b. Compensated hypovolemic shock. Oxygen through mask, bolus fluid therapy 20ml/kg/20mins
c. Compensated septic shock. Oxygen through mask, bolus fluid therapy 20ml/kg/20 min., wide spectrum antibacterial therapy.
d. Decompensated hypovolemic shock. Oxygen through mask, bolus fluid therapy 20ml/kg/20mins
e. Acute respiratory failure. Oxygen through mask, physiological fluid demand 4ml/kg/hour

An unresponsive 5-months-old baby was brought to ER. You detect no breathing, central pulse is rare. What are your actions? Select one:

a. Intubate the patient, start ventilations, connect monitor-defibrillator, monitor HR and peripheral pulse
b. Suction of the airways, perform 5 rescue breaths using bag-valve-mask, connect monitor-defibrillator, peripheral venous cannulation, fluid therapy
c. Suction of the airways, perform 5 rescue breaths using bag-valve-mask, start chest compressions, connect monitor-defibrillator, peripheral venous cannulation
d. Start chest compressions, open the airway, 5 rescue breaths, central venous access, fluid therapy
e. Open the airways, connect monitor-defibrillator, start chest compressions, intubate the patient, central venous access

Women 35 years old, G3 P3 (gravidity and parity) all her deliveries were normal except after the second one she did D&C (dilation and curettage), now she has amenorrhea 7 months, Labs all normal except: high FSH, high LH, low estrogen, what is the diagnosis? Select one:

a. Ovarian failure
b. Asherman syndrome
c. Turner syndrome
d. Sheehan syndrome
e. PCOS (Polycystic ovary syndrome)

↑ FSH + ↑ LH + ↓ estrogen = ovarian failure ⭐

This is called:
Hypergonadotropic hypogonadism

Meaning:
ovaries are not responding
pituitary compensates by increasing FSH/LH

A 25-year-old woman suddenly felt rapid heartbeat, dizziness, shortness of breath, sweating. She was very scared of a possible heart attack or stroke. An ambulance was called. The condition improved after 20 minutes. The patient has had repeated attacks for four months. Several times the Emergency Medical Service was taken to the hospital's reception department. Research has been done. Somatic diseases are not cured. What disorder is? Select one:

a. Panic attack
b. Hypochondria
c. Thanatophobia
d. Acute stress reaction
e. Neurasthenia

At the beginning of February, a-25-year old patient was hospitalized on the second day of his illness. He fell ill acutely: fever up to 39°C, severe headaches. After a day, nausea and vomiting started. During examination of the patient, stiffness of neck muscles and a positive Kernig's sign were found. Isolated elements of a macular haemorrhagic rash were observed in the thighs and buttocks. Results of the performed laboratory tests: blood sample test: leukocytes – 22 x 10e9/l (neutrophils – 97 proc.), platelets – 85 x 10e9/l; CRP – 210 mg/l; examination of cerebrospinal fluid: cytosis – 2,400 x10e6/l, protein – 2.5 g/l, glucose – 0.3 mmol/l (blood glucose – 6.0 mmol/l). Which illness will you suspect first? Select one:

a. Bacterial meningitis
b. Viral meningitis
c. Tick-borne encephalitis
d. Neuromaliaria
e. Neuroborreliosis

This is classic Bacterial meningitis, likely meningococcal meningitis given the hemorrhagic rash.
The key clues are acute fever, meningismus, neutrophilic CSF, very low CSF glucose, high protein, and toxic inflammatory labs.

A 30-years-old patient complained of bleeding after defecation. Symptoms last for about 10 years. Bleeding occurs 1 to 2 times a year. He treated himself previously with creams and ointments and it helped. Now he is sick for 2 weeks. Clinical examination showed large skin tags at 3, 7 and 11 o'clock as well as prolapsed hemorrhoids. Blood tests: Hgb 80 g / l. During anoscopy, enlarged and prolapsed haemorrhoids are present. Colonoscopy - no pathology. What treatment would you choose? Select one:

a. Whitehead hemorrhoidectomy
b. Ligation of hemorrhoids using the Barron method
c. Sclerosis of hemorrhoids
d. Adequate conservative treatment with venotonics, laxatives, warm baths
e. Milligan-Morgan hemorrhoidectomy

Vancomycin (1 g every 12 hours) was prescribed for patient with staphylococcal (methicillin sensitive *Staphylococcus aureus*, MSSA) bacteremia. During IV injection, patient experienced flush, redness and itching of the upper part of the body, shortage of breath, tachycardia. The injection was stopped. Which statements related to the situation are correct? Select one or more:

a. Patient experienced anaphylactic reaction; the vancomycin should be withdrawn and not used again in this patient
b. Vancomycin is a first line antibiotic for the treatment of staphylococcal (MSSA) bacteremia
c. Patient experienced 'red man" syndrome due to histamine release by vancomycin
d. Reaction occurred due to bolus injection of vancomycin
e. For the treatment of MSSA infection oxacillin should be preferred over vancomycin

Unconscious 2-year-old boy was brought to ER. Cyanotic, with no visual rash, T 36°C, RR 20/min, HR 82/min. Parents claim he was totally healthy before. What emergency treatment is needed? Select one:

a. Evaluate breathing and circulation, give oxygen through mask, venous access, massive fluid therapy, evaluate consciousness state using GCS (Glasgow Coma Scale), collect thorough anamnesis
b. Evaluate breathing and circulation, give oxygen through mask, evaluate consciousness state using GCS (Glasgow Coma Scale), evaluate neurological signs, collect thorough anamnesis
c. Evaluate breathing and circulation, give oxygen through mask, collect thorough anamnesis, perform gastric lavage due to possible poisoning
d. Give oxygen through mask, evaluate consciousness state using GCS (Glasgow Coma Scale), evaluate breathing and circulation, collect thorough anamnesis, perform gastric lavage due to possible poisoning
e. Evaluate breathing and circulation, give oxygen through mask, perform head CT, measure blood glucose level, collect thorough anamnesis

45 years old woman is complaining of decreased vision of the left eye, ocular pain, photophobia. The symptoms are lasting for several days. The patient had fever and sore throat 1 week ago.

**Status ophthalmicus:**

- Best corrected visual acuity:
    - Oculus dexter = 1.0
    - Oculus sinister = 0.3
- Intraocular pressure:
    - Oculus dexter = 16 mmHg
    - Oculus sinister = palp. N
- Slit lamp examination:
    - Oculus dexter - unremarkable.
    - Oculus sinister – slight mixed conjunctival injection, corneal sensitivity diminished, dendritic epithelial defects, fluorescein positive, corneal mild edema, corneal endothelial dusting, anterior chamber deep and quite, reactive pupil, fundus details invisible due to corneal edema.

Which diagnosis is the most likely? Select one:

a. Herpetic keratitis
b. Fungal keratitis
c. Acantamoebic keratitis
d. Bacterial conjunctivitis
e. Allergic conjunctivitis

This is classic Herpetic keratitis. The hallmark clue is the dendritic corneal ulcer with decreased corneal sensation, especially after a recent viral illness.

46 years old woman has leakage of urine on physical activities, while coughing and sneezing. Above mentioned symptoms appeared 5 years ago and progressed. There is no neurological diseases or pelvis trauma before. Tolterodine and physical training exams without any positive effect. She use several pads per day.Physical examination: genitalia and external orifice of urethra without pathology. There is positive urine leakage test with full urinary bladder. Urinalysis normal. Sonoscopy: there is no hydronephrosis and residual urine. What method of treatment do you propose? Select one:

a. Psychotherapy
b. Kinesiotherapy
c. Medical treatment
d. Sling implantation
e. To drink less water

55 yers old patient feels weakness and dizziness usually in the morning or after physical activity. Within last few years his condition gradually deteriorates, episodes of weakness became more frequent and severe. The patient noticed significant improvement after the meal, but eventually he gained weight due to frequent eating. He takes ACE inhibitors for hypertension for two years. What is the most likely diagnosis? Select one:

a. Feochromocytoma.
b. Functional hypoglycemia. wrong
c. Hyperglycemic state.
d. Exacerbations of hypertension.
e. Insulinoma.

This patient most likely has Insulinoma causing recurrent hypoglycemia.
The classic clues are episodes during fasting/exertion, relief after eating, and weight gain from frequent eating to prevent symptoms.

Endogenous hyperinsulinism causes:
hypoglycemia during fasting
neuroglycopenic symptoms
adrenergic symptoms

Patient with persistent moderate to severe allergic rhinitis has hypersensitivity to D. pteronyssinus, D. farinae and cat allergens. Which medication should be prescribed as first-line treatment? Select one:

a. Nasal antihistamines as needed.
b. Oral glucocorticoids.
c. Nasal washings and nasal antihistamines.
d. Nasal glucocorticoids
e. Intranasal antihistamines and intranasal leukotriene antagonists.

A 53-year-old G0 woman comes to your office to report that her menses have returned. She underwent menopause 4 years ago, and had not ex- perienced any bleeding until the past 3 months. She reports several epi- sodes of bleeding. She has a normal Pap smear history and had a normal pap and negative high-risk HPV screen performed 2 years ago. She has been taking over-the-counter medications and supplements for hot flashes, but cannot recall the names of them. She is in a monogamous relationship with her husband of 20 years. Further history reveals that she has type 2 diabetes and has a lifelong history of oligomenorrhea with heavy or prolonged bleeds when she does have a cycle. She had a prior laparoscopic cholecystectomy 8 years ago as her only surgical his- tory. Physical examination reveals the following: BP: 150/85 mm Hg; BMI: 48; general characteristics: obese female with moderate acanthosis over posterior neck, inner thighs and inguinal area, moderate hirsutism over chin/neck area; Abdomen: well-healed laparoscopic scars; GU: uterus mobile, 9 weeks' sized (mildly enlarged), limited palpation of adnexa due to habitus, overall nontender, without discrete masses. Which of the following is the next best step in evaluation? Select one:

a. Colonoscopy
b. Diagnostic laparoscopy
c. Endometrial biopsy
d. Cystourethroscopy
e. Serum FSH

Any postmenopausal bleeding = endometrial cancer until proven otherwise.

A 5-year-old girl complaining of fever for 2 months was detected with hemorrhagic rash, enlarged liver, spleen and lymph nodes. Blood tests: pancytopenia, Hb 82g/l, ESR 70mm/h. Bone marrow biopsy showed hyperplasia, lymphocytosis, blasts 72%, hyperploidy. What is your preliminary diagnosis and what test will you perform next? Select one:

a. Sepsis and bacteriological investigatement from all specimen
b. Chronic myeloid leukemia and bone marrow aspiration, immunophenotyping and genetic investigatement
c. Hypersplenism, spleen byopsy
d. Acute lymphoblastic leukemia/myelomonocytic leukemia and blasts immunophenotyping by flow cytometry
e. Chronic lymphocytic leukemia, molecular genetic test

The key clues are pancytopenia, hepatosplenomegaly, lymphadenopathy, and >20% blasts in bone marrow. The next crucial step is immunophenotyping by flow cytometry to determine leukemia subtype. ALL MOST COMMON CHILDHOOD LEUKEMIA !

A 51-year-old woman presents to your office amenorrhea for the past year. Since she has not had any hot flashes, she is wondering if she is menopausal. What blood test would connfirm the diagnosis of menopause? Select one:

a. FSH
b. Prolactin
c. Human chorionic gonadotropin (hCG)
d. Testosterone
e. Estrogen

FSH becomes elevated because:
ovaries produce less estrogen
negative feedback to pituitary is lost

This causes:
increased FSH secretion

Very high-yield hormone pattern:
↓Estrogen→↑FSH

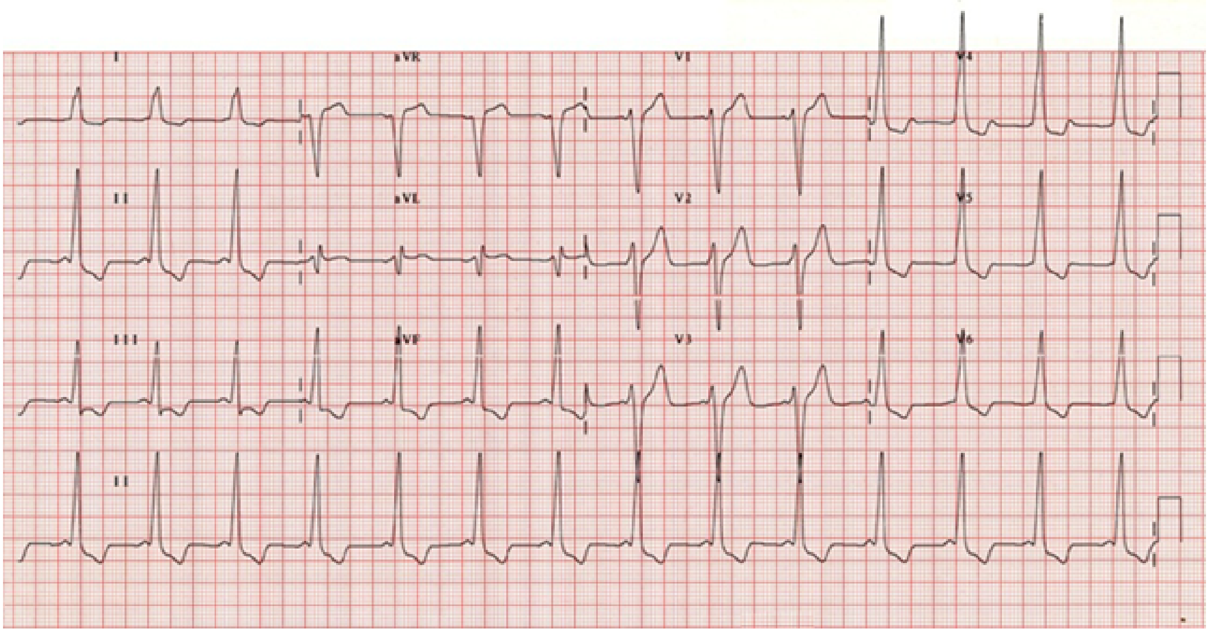
Menopause is confirmed by elevated Follicle-stimulating hormone test levels. When ovarian estrogen production falls, the pituitary increases FSH due to loss of negative feedback.

At the emergency department you are consulting a 48 y.o. male, complaining with nausea and acute pain in upper abdomen. Pain intensity score is 8 out of 10. Anamnesis data: first episode of similar pain in lifetime; has consumed several units of strong alcohol two days ago; denies any concomitant diseases, surgery in the past or allergies. The patient is adequate and of normal consciousness, body temperature 37,4 oC, hemodynamics and respiratory functions are stable. When palpating, the abdomen is painful in upper part with local tension of abdominal wall muscles. Available blood laboratory assay results: leukocytosis 14,2x109/l; hemoglobin 168g/l; C reactive protein 92mg/l; creatinine 122; lipase 3584 U/l; blood electrolytes, common bilirubin and liver enzymes are normal. What would be your initial treatment plan that should be started immediately at the emergency unit? Select one:

a. Intravenous crystalloids infusion and antibiotic therapy
b. Intravenous crystalloids infusion and adequate analgesics
c. None of the options mentioned, as the patient must be transferred immediately to stationary unit for urgent surgical treatment
d. Intravenous crystalloids infusion and antipyretics
e. Adequate analgesics and antibiotic therapy

This patient has classic Acute pancreatitis, likely alcohol-induced.
Initial emergency treatment is
aggressive IV fluids and good pain control —
antibiotics are NOT routinely indicated unless infection is suspected.

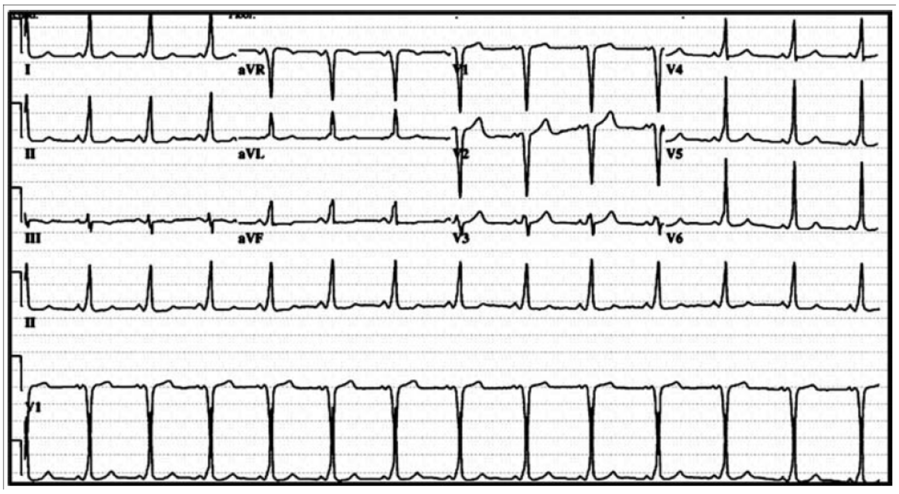
An 18-year-old male presents to his primary care provider with a complaint of episodic palpitations that tend to start abruptly. There is not a consistent triggering event. After these episodes, he often senses the urge to micturate. The following ECG was obtained.



The most likely diagnosis based upon the clinical symptoms and ECG is: Select one:

a. Supraventricular tachycardia due to accessory pathway (WPW syndrome)
b. Paroxysmal atrial fibrillation
c. IIIrd degree AV block
d. Ventricular fibrillation
e. Paroxysmal atrial flutter

An 18-year-old male presents to his primary care provider with a complaint of episodic palpitations that tend to start abruptly. There is not a consistent triggering event. After these episodes, he often senses the urge to micturate (urinate). The following ECG was obtained.The most likely diagnosis based upon the clinical symptoms and ECG is:



Select one:

a. III degree AV block
b. Ventricular fibrillation
c. Paroxysmal atrial fibrillation
d. Paroxysmal atrial flutter
e. Supraventricular tachycardia due to accessory pathway (WPW syndrome)

A 10-year-old girl presented to emergency room with complains of stomach pain, nausea, vomitting. She was healthy before, although her parents noticed that she have lost some weight. She started to drink more water (around 3 litres a day), and started to urinate at night. On examination: dry mouth mucosa, deep rapid breathing. What is the most probable diagnosis? Select one:

a. Diabetes insipidus
b. Acute gastroenteritis
c. Type-1 diabetes mellitus presenting with ketoacidosis
d. Apendicitis
e. Nocturnal enuresis

69 year-old woman complains of pain and swelling of the right knee. The symptoms occurred a week ago after hard physical labor in the garden. The pain intensifies in motion, and disappears completely at rest. No morning stiffness. Inspection: normal temperature, blood pressure 128/72 mm Hg, pulse 88 beats / min. BMI - 32 kg / m2. Right knee is moderately swollen, no signs of redness or elevated temperature. Fluid in the popliteal cyst is suspected. Flexion of the knee is a little painful, joint movements are limited. Other joints and soft tissues without changes. X-rays show right knee joint space narrowing, subchondral sclerosis. Aspiration of right knee was performed - about 5 ml of the liquid was aspirated, the white blood cell count 0.5x109 / l, with the prevalence of lymphocytes. Which one of the following diagnoses is most likely: Select one:

a. Microcrystal arthropathy
b. Infectious arthritis
c. Osteoarthritis
d. Deep vein thrombosis of the leg.
e. Fungal arthritis

This is classic Osteoarthritis: older patient, obesity, pain worsened by activity and relieved by rest, no morning stiffness, and X-ray findings of joint-space narrowing and subchondral sclerosis.

68 year-old patient is admitted to the emergency department with seizures. Head CT (computed tomography) results are normal. Blood analysis is normal except for sodium of 158 mmol/l. Which treatment options are appropriate for this patient? Select one or more:

a. 5 % dextrose solution
b. hemodialysis
c. 10 % Ca gluconate injection
d. 3 % NaCl infusion
e. normal saline infusion

45 year old patient two week ago experienced painless hematuria episode. At the mean time urine is clear. Patient is a smoker for 10 years. What disease you must suspect and check in first place? Select one:

a. Bladder cancer
b. pyelonephritis
c. cystitiUrethral stricture
d. Kidney stone disease

36 year-old woman was admitted to the hospital due to seizures that occured at home. The BP measured at home was 160/100 mmHg. The first pregnancy, 38 weeks of gestation, low risk pregnancy, the last antenatal visit was two weeks ago, all prenatal tests were normal. Maternal examination – pulse 90 bpm, BP 160/110 mmHg, peripheral edema. The fundus of the uterus 35 cm, fetal lie – longitudinal, vertex presentation. Vaginal examination – vaginal discharges normal, cervixdilatation 5 cm. Ultrasound examination – estimated fetal weight – 3250 g (normal for gestational age), amniotic fluid index normal, NST – reactive. Urine test – protein 5 g/l. The severe preeclampsia was diagnosed. How should the pregnant woman be managed? Select one or more:

a. Caesarean delivery immediately
b. Admission to the hospital, maternal and fetal monitoring, blood analyses
c. Labour induction after maternal stabilization
d. Urine output measurement (a Foley catheter)
e. Magnesium sulfate infusion, antihypertensive drugs

Eclampsia: seizures + severe hypertension + proteinuria at 38 weeks

A 30-year-old G0 with CIN3/Ca in situ comes in for LEEP procedure (cervical conisation) and tells you that she plans to become pregnant sometime in the next year. What are the complications of surgical excisional procedures of the cervix? Select one or more:

a. Infection
b. Cervical insufciency
c. Bleeding
d. Infertility
e. Cervical stenosis

A 74-year-old patient arrived at the emergency department due to dyspnoea, difficulty swallowing, fever, difficulty breathing, neck pain. Examination: the lateral pharyngeal wall is pushed more medially on the left; the lateral pharyngeal wall is pushed to midline along the length of the pharynx till the arytenoids. Palpation - neck feels inflamed, painful in the left side. What is the most likely diagnosis? What is the first-choice visual method in deep neck diagnostics? Select one:

a. Floor of the mouth abscess + CT
b. Retropharyngeal abscess + CT
c. Parapharyngeal + MRI
d. Parapharyngeal abscess + CT
e. Parapharyngeal + Neck radiography

Your patient suffers from migraine headaches. She has a history of irregular menses and used sumatriptan on several occasions before realizing she was pregnant. Ultrasonography shows an intrauterine pregnancy of 9 weeks gestation. How do counsel her about risks of this medication? Select one or more:

a. Increased risk of limb reduction deformities
b. Decreased amniotic fluid volume with continued regular use
c. Can be used during pregnancy
d. Increased risk of spontaneous abortion
e. No increased risks identified to date

A 75 years old man with his wife arrived for the consultation. The patient complains that sometimes he feels dizzy and has a low back pain. His wife says that the patient began to change 3 years ago: the patient often loses his personal belongings and money, gets lost if left his house, he is not able longer to clean up, often forgets recent events, confuses his relatives, is not able to tie his shoe laces. The patient's condition is gradually deteriorating. Physical and neurological examination: blood pressure - 144/92 mm Hg, heart rate - 68 beats/min. Normal state of consciousness. There are no focal neurological signs. Meningeal signs absent. Mini-Mental State Examination (MMSE) – 17 points. What is the preliminary diagnosis of the patient? Select one:

a. Alzheimer's disease.
b. Mild cognitive impairment.
c. Vascular dementia.
d. Frontotemporal dementia.
e. Delirium.

A 75 years old man with his wife arrived for the consultation. The patient complains that sometimes he feels dizzy and has a low back pain. His wife says that the patient began to change 3 years ago: the patient often loses his personal belongings and money, gets lost if left his house, he is not able longer to clean up, often forgets recent events, confuses his relatives, is not able to tie his shoe laces. The patient's condition is gradually deteriorating. Physical and neurological examination: blood pressure - 144/92 mm Hg, heart rate - 68 beats/min. Normal state of consciousness. There are no focal neurological signs. Meningeal signs absent. Mini-Mental State Examination (MMSE) – 17 points.
What additional diagnostic work-up is needed? Select one or more:

a. Visual evoked potentials
b. Neurocognitive tests
c. Thyroid panel – TSH, Free T4
d. Electroencephalography (EEG)
e. Head CT/MRI

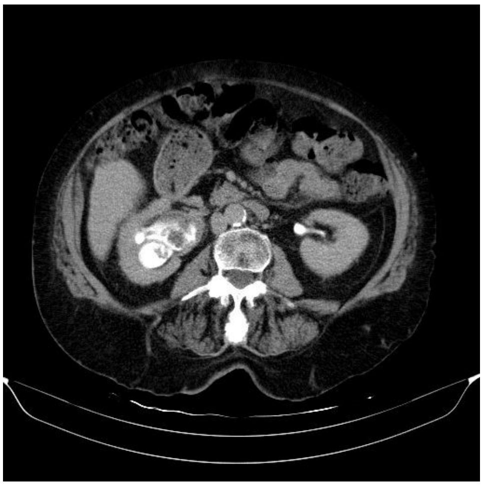
Hypothyroidism can mimic or worsen dementia

A 32-year-old woman (first pregnancy, first delivery, 33 weeks of gestation) was admitted to the hospital due to irregular contractions. The fetal well-being was evaluated – NST reactive, the amniotic fluid index normal, the estimated fetal weight 2100 g (normal weight for gestational age). Examination results of pregnant woman – temperature 36.6 C, pulse 78 bpm, BP 110/70 mmHg, fetal lie – longitudinal, vertex presentation. Vaginal examination – normal vaginal discharges, no signs of preterm membrane rupture, external os of cervix closed, cervix length by ultrasound 5 mm. The results of urine and blood analyses – normal. How should she be managed in the hospital? Select one:

a. tocolysis, fetal lung maturation, antiobiotics
b. labour induction
c. caesarean delivery
d. observation, no treatment
e. fetal lung maturation, tocolysis during this treatment

This patient has threatened/preterm labor at 33 weeks with a very short cervix (5 mm) and contractions, but no infection or membrane rupture. The goal is to delay delivery briefly with tocolysis so corticosteroids can mature the fetal lungs.

75-year-old patient complains of right flank pain. Urinary microscopy shows 20 erythrocytes in HPF. CT urography reveals 2 cm mass in the pelvis of the right kidney. Cytology shows high-grade papillary carcinoma cells. What is the most appropriate treatment?



This patient has Upper tract urothelial carcinoma of the renal pelvis.
High-grade urothelial tumors are treated with removal of the kidney AND ureter, including the ureteral orifice/bladder cuff.

Select one:

a. Right laparoscopic nephroureterectomy with resection of ureteral orifice
b. Right ureteroscopy and laser ablation of the tumor;
c. Biological therapy
d. Active surveillance for 6 month
e. Right nephrectomy;

A 48-year-old man is brought to the Emergency Department. Due to difficult general condition he is not able to define his complaints. According to the patient’s relatives, 10 days ago he injured his right thumb, but not seek medical attention. Previously has not been immunized against tetanus. Objectively: body temperature was normal; the patient was conscious, but very sluggish, sleepy. Meningeal symptoms were negative, there were no focal neurological symptoms. While lying, kept lifting his torso up, head tilted back. Hemodynamics was stable. Abdomen was firm, tense. An unhealed wound was observed on the right thumb, also, the thumb was reddened. Which disease is this man sick with? How would you treat it? Select one or more:

a. Patient has tetanus. I will admit him to the intensive care unit (ICU), prescribe antibiotics and pathogenic therapy
b. Patient suffers from bacterial meningitis. I will treat him with antibiotics
c. Patient has erysipelas. I will give him symptomatic therapy
d. Patient has tetanus. I will treat him with anti-tetanus immunoglobulin
e. Patient has sepsis. I will treat him with antibiotics

A 62-year old lady presented with Dyspnoea on minimal exertion, Chest Tightness, and Dizziness. Having rushed incline, she lost her consciousness. What investigations would you request first to rule out or confirm a diagnosis of the aortic valve stenosis? Select one or more:

a. Cardiac ultrasound
b. Magnetic Resonance Imaging Tomography of the Head.
c. Computed Tomography of the head.
d. Spirometry and Chest X-ray.
e. Computed Tomography of the chest.

The patient was reffered to allergologist because of the suspicion of allergic rhinitis. The disease flares several years in the spring and summer. Currently there is an exacerbation of the disease and patient is taking antihistamines and topical glucocorticoids. What investigation can be done to determine the etiology of the disease? Select one:

a. Specific IgE for inhaled allergens.
b. Skin patch test.
c. Total IgE in the blood.
d. Cytological examination of nasal secretion.
e. Skin prick allergy tests with inhaled allergens.

The examiner is choosing Specific IgE testing because the patient is currently taking antihistamines and topical steroids during an active exacerbation. Antihistamines can suppress skin prick test reactions and make them unreliable!!!!!!

A 48-years-old patient has fever and diarrhea up to 5 times daily. The stool is mixed with small amount of blood. Painful infiltration is palpable on the right side of the abdomen. This episode is the third. What is your diagnosis? Select one:

a. Caecal tumor
b. Acute appendicitis
c. Inflammatory bowel disease
d. Acute cholecystitis
e. Acute complicated diverticulitis

A 26-year-old G0 patient comes in with a problem visit for a complaint of an intermittent painless mass on her vulva near the introitus. It seems to be aggravated by intercourse, but usually goes away on its own. She's had two lifetime sexual partners and has been with her last partner for 5 years. She has always had normal periods and Pap smears and has never had an STI. You examine her and nd a 3 cm nontender mass in the area described. What type of abnormality ist his most likely to be? Select one:

a. Skene's gland cyst
b. Cystocele
c. Epidermal inclusion cyst
d. Bartholin's duct cyst
e. Gartner's duct cyst

classic Bartholin duct cyst: a painless vulvar mass near the introitus that enlarges with intercourse due to blockage of gland drainage.

The patient arrived to the Emergency Department complaining with prolonged fever, weakness, painful and enlarged neck lymph nodes, with muscle pain in shoulder region. From the disease anamnesis, he is unwell for two weeks. He was complaining with fatigue, subfebrile fever 37.3-37.8ºC and sweating. At the end of the first week of his illness the lymph nodes enlarged, appeared severe neuropathic pain in the temporal – occipital region. Epidemiological anamnesis: patient spend time outdoors and had barbeque. On examination: body temperature was 37.2ºC. Tonsils and submandibular lymph nodes were normal. Liver and spleen were not enlarged. Neurological symptoms were negative. Painful, enlarged lymph nodes were noticed in the left neck area, they were 2.5 x 3.0 cm in diameter and in the suboccipital region were 1.5 x 2.0 cm in diameter. What diagnosis will you suspect? Select one:

a. Enterovirus infection
b. Toxoplasmosis
c. Tularemia
d. Yersiniosis
e. Epstein – Barr virus (EBV) infection

isolated cervical/occipital lymphadenopathy with otherwise relatively mild systemic illness and no major focal findings.

46-year-old type 1 diabetic man attends a routine follow-up clinic. A urine dipstick analysis demonstrates 3+ proteins, 1+ blood, no nitrates and no leucocytes. His annual blood tests show sodium of 135 mmol/L, potassium of 8 mmol/L, creatinine of 230 µmol/L and a urea of 24 mmol/L. Select the MOST appropriate diagnoses in this case: Select one or more:

a. Severe hypoglycaemia
b. Diabetic nephropathy
c. Pyelonehritis
d. Dehydration
e. Renal failure

Your patient is now 6 hours postpartum. During labor she had an epidural. Her vital signs are within normal range. Her uterus is palpated above the level of the umbilicus. She has not urinated. The next management step for this patient would include which of the following? Select one:

a. Ice pack to perineum
b. None of the above
c. Urinary catheter placement
d. Uterine massage
e. Encourage fluid consumption

A 2-year-old boy developed difficulty breathing and wheezing, became irritated, had diarrhea suddenly after eating strawberries. RR 46/min, HR 140/min, ABP 105/64mmHg. What syndrome is predominant and what actions are necessary? Select one:

a. Compensated anaphylactic shock. Adrenaline muscularly, oxygen therapy, bolus saline infusion 20ml/kg/20min, clemastin, ranitidin, methylprednisolone.
b. Anaphylactic reaction. Adrenaline muscularly, oxygen therapy, dexamethasone, salbutamol inhalation, clemastine, ranitidine.
c. Acute respiratory distress due to upper respiratory tract obstruction caused by anaphylaxis. Adrenaline muscularly, oxygen therapy, adrenaline inhalation, clemastin, prednisolone.
d. Acute respiratory distress due to lower respiratory tract obstruction caused by anaphylaxis. Adrenaline muscularly, oxygen therapy, salbutamol inhalation, clemastin, ranitidin, methylprednisolone.
e. Decompensated anaphylactic shock. Adrenaline muscularly, oxygen therapy, intubate patient, bolus saline infusion 20ml/kg/min, inotrope infusion, clemastin, ranitidine, methylprednisolone.

IM adrenaline FIRST ⭐

Epinephrine is lifesaving.

Also:

oxygen
inhaled salbutamol for wheezing
antihistamines
steroids

You are examining a 12 month boy with suspected child neglect. You notice a prominent forehead and large hypotonic belly, his muscle tonus is low and the dimensions of anterior fontanelle are 4x3 cm. You suspect rickets. Which two lab tests would you order first confirm your suspicions? Select one or more:

a. Serum vitamin D levels
b. Calcitonin
c. Serum calcium
d. Alanine aminotransferase activity
e. Skull X-ray

Rickets happens because bones cannot properly mineralize, most commonly due to vitamin D deficiency. Vitamin D and calcium are tested because they are central to bone mineralization physiology.

A 42-year-old male arrived at a hospital complaining of pain, decreased vision and redness of the right eye. The symptoms appeared 5 days ago. It is known that the patient suffers from ankylosing spondylitis.
V RE = 0.4 (not correctable), V LE = 1.0
Tn RE = 18.9 mmHg, Tn LE = 14.6 mmHg
RE - moderately irritated, intense pericorneal injection. Cornea is clear, smooth and shinny. On the endothelium there are lots of small whitish precipitates. Anterior chamber is of medium depth, inside - inflammatory cells and fibrin exudate. Hyperemia of the iris, pupil is irregular, posterior synechiae. Red fundus reflex, the details are unclear because of changes in anterior segment. LE – eye is calm, anterior segment, posterior segment and fundus are without pathological changes.
What is the initial preliminary clinical diagnosis and what general practitioner's tactics should be?
Select one:

a. Rhegmatogenous retinal detachment in the right eye. Urgent referral to an ophthalmologist.
b. Inflammation of the uvea in the right eye. Urgent referral to an ophthalmologist. Rheumatologist consultation.
c. Bacterial conjunctivitis of the right eye. GP should prescribe antibiotic eye drops and arrange second appointment in 2 days.
d. Acute Angle Closure Glaucoma. Urgent referral to an ophthalmologist.
e. Acute adenoviral conjunctivitis of the right eye. Urgent referral to an ophthalmologist. Patient should be advised to stay at home to prevent spreading the infection in work environment.

60 years old patient presented to ENT specialist because of the hearing loss and tinnitus. He was working at the mill all his life, he did not use ear protection during work. You do the audiometry and suspect hearing loss. Which of these statements are correct? Select one or more:

a. Chronic noise-induced hearing loss is reversible upon termination of noise exposure
b. Prolonged exposure to noise - exposure to noise for more than 8 hours per day where the sound intensity exceeds 85 dB
c. It is very important to disseminate information about the harmful effects of noise and to teach preventive measures
d. Acoustic trauma can be caused by 50 dB intensity sound
e. Chronic noise-induced hearing loss is characterized by symmetrical bilateral progressive high-frequency sensorineural hearing loss

45 years old male was admitted to the emergency department due to abdominal pain. Clinical investigations: normal body weight, BP 170/80 mmHg, pain in the right iliac abdominal area on palpation. Abdominal CT: acute appendicitis and the left adrenal gland tumor of 10x20 mm. The patient underwent successful operation and was discharged from the hospital. What further investigations are needed due to adrenal tumor? Select one:

a. Analyse plasma cortisol. Repeat abdominal CT in one year.
b. Analyse plasma aldosteron and renin.
c. Analyse plasma metanephrines and perform dexamethason suppression test
d. Perform abdominal ultrasound.

This patient has an incidental adrenal mass ("adrenal incidentaloma").

Every adrenal incidentaloma must be evaluated for hormone secretion — especially Pheochromocytoma and cortisol excess.

Therefore, plasma metanephrines and a dexamethasone suppression test are required.

A 31-year-old, G0, obese woman presents to your for an infertility consultation. She and her husband have been attempting pregnancy for the preceding 18 months. She states that her menses are irregular, occurring every 25 to 47 days, and sometimes she skips menses altogether. They are sometimes heavy, other times light with just brown spotting. She notes that her menses have always been this way, ever since menarche at age 12. She denies any history of STI. On further questioning, she admits to plucking and shaving excessive hair from her chin, around her navel, and on her lateral thigh. She also admits to bothersome acne and extreme dificulty with weight loss. Physical examination reveals obesity with BMI 31, normal breast development, and presence of excessive hair as described by the patient. Pelvic examination reveals normal external genitalia and unremarkable bimanual examination. What additional information do you need to make your diagnosis and management of infertility? Select one or more:

a. Kariotype test
b. Semen analysis
c. Pelvic ultrasound
d. Day 3 serum FSH and estradiol
e. Serum testosterone, DHEA-S, and prolactin

This woman most likely has Polycystic ovary syndrome causing infertility. Infertility evaluation requires confirming ovulatory dysfunction/hyperandrogenism, assessing ovarian morphology, AND evaluating the male partner.

The 68-years-old patient had endoscopic diagnosis of neuroendocrine tumor of the small intestine , histologically G1. After CT scan of the chest and magnetic resonance tomography of the abdominal organs, no signs of tumor spread were detected. Scintigraphy of complete body somatostatin analogues was performed, during which there was no evidence of somatostatin expressing tumor. Treatment starts with? Select one:

a. Chemoradiotherapy
b. Radical surgical operation without lymphadenectomy
c. Only chemotherapy
d. Radical surgical operation with lymphadenectomy
e. Palliative surgery

35 year old woman suffers from coldness and whitening of hand fingers, particularly in cold surroundings and during emotional stress. Ordinary measures to warm up the limbs are no longer efficient. A year ago, this woman was diagnosed with limited systemic sclerosis. Moreover, the woman suffers from "acid in the stomach" and regurgitation. Women also complains of swelling of the fingers and hands and their limited function. Clinical examination revealed normal body temperature, blood pressure 128/75 mm Hg (symmetrical in both upper arms), the heart rate 88 beats / min. When examining the skin, presence of sclerodactily is noted. Radial pulse is palpable and symmetrical in both hands. Which of the following drugs would you prescribe? Select one:

a. Cyclophosphamide
b. Beta-adrenergic blocker
c. Calcium channel blockers
d. Prednisone
e. Non-steroid anti-inflammatory drug

This patient has Limited systemic sclerosis with severe Raynaud phenomenon.
First-line treatment for symptomatic Raynaud in systemic sclerosis is a Calcium channel blocker.

Calcium channel blockers are used because Raynaud phenomenon is caused by excessive vasospasm of the small arteries in the fingers. These drugs relax blood vessels and improve blood flow to the digits.

A 65-year-old female complains of itching, jaundice, anorexia, and weight loss over 3 weeks. Her urine is dark and her stools are light. Abdominal exam shows hepatomegaly and gallbladder distention. Liver enzymes are elevated. Ultrasound and CT shows dilated bile ducts and intrahepatic biliary dilation but no definitive cause. What is the next step in evaluation? Select one:

a. Laparoscopy
b. Percutaneous transhepatic cholangiography (PTC)
c. Magnetic resonance cholangiopancreatography (MRCP)
d. Ultrasound guided liver biopsy

A couple presents because they have been trying to conceive for 18 months. During the interview you learn that the man has fathered a child in a previous relationship and is in good health. The woman is 28 and reports that she has had painful menses for the past 5 or 6 years. After completing your history you explain to your patient that you need to perform an examination before making any recommendations. You explain that women with endometriosis often have a normal examination but that there are certain findings that are associated with endometriosis. During your examination, which of the findings listed below would NOT increase your suspicion that she has endometriosis. Select one:

a. A fixed deviated uterus
b. Uterosacral nodularity on rectovaginal examination
c. A fixed adnexal mass
d. An enlarged irregular uterus
e. Tender adnexa

Endometriosis means uterine lining tissue is growing outside the uterus — usually on the ovaries, peritoneum, or ligaments.

Because the disease mainly causes inflammation and scarring OUTSIDE the uterus, we expect fixation/ tenderness/nodules, but not a large irregular uterus.

A teenager came to emergency room complaining of an acute chest pain, lasting up to 20 sec. Breathing and movement disorders are concomitant to pain. He claims to have been totally healthy before. What questions are absolutely necessary to complete special disease's anamnesis? Select one or more:

a. Presence of chest trauma, pain connection with meal, respiratory or gastrointestinal disease during the last month, coronary heart diseases among the family members in any age.
b. Presence of cocaine addiction.
c. Presence of cough.
d. Presence of sudden unexpected death syndrome among the family members.
e. Presence of pain along the night, intolerance of physical activity, presence of syncope's, palpitation's.

13-year-old girl complains of constant abdominal pain, vomited twice, had liquid stool and fever of 38C. She was admitted to the ER on the 5th day of her disease. On examination, you detect painful right lower part of the abdomen, painful formation in the suprapubic area. On ultrasound you detect periappendicular bowel infiltrate (mass without abscess). What tactic do you choose? Select one:

a. Laparoscopic appendectomy
b. Open appendectomy
c. Conservative treatment (antibacterial therapy)

2 years old patient develops bruises and petechia, more in legs than in the rest of the body. Two weeks before boy was ill with flu. There is no hepatosplenomegaly and lymph nodes are normal. Laboratory findings are thrombocytes 15,000/mm3, hemoglobin, hematocrit and leucocytes are within normal range. What is your preliminary diagnosis? Select one:

a. Von Willebrand disease
b. Acute lymphoblastic leukemia
c. Idiopathic thrombocytopenic purpura
d. Aplastic anemia
e. Familial thrombocytopenia

Immune thrombocytopenic purpura is a condition where the immune system mistakenly destroys platelets, usually after a viral infection. The answer makes sense because this child has classic post-viral petechiae/bruising with isolated severe thrombocytopenia and otherwise normal examination/labs.

A 57-year-old man with type 2 diabetes first diagnosed 2 years ago. Laboratory evaluation reveals blood urea nitrogen 14 mmol/l, serum creatinine of 120 µmol/l (eGFR 57ml/min/1.73m2), normal electrolytes. Albumin to creatinine ratio 250 mg/g. He has chronic kidney disease …
Select one:

a. G3b, A2
b. G3a, A2
c. G3b, A3
d. G4, A3
e. G3a, A3

30-year old male was admitted to the emergency department because of fever and impaired consciousness. Fever, disturbed behavior and somnolence developed gradually over 2 days. On admission decreased level of consciousness, lethargy, fever 38.9°C, HR 105 bpm were recorded. No focal neurological or meningeal signs were observed. Brain magnetic resonance imaging revealed bilateral signal abnormalities in the medial part of the temporal lobes. What is your preliminary diagnosis? Select one:

a. Stroke.
b. Tick-borne encephalitis.
c. Herpes simplex encephalitis.
d. Abscess in the left cerebral hemisphere.
e. Neuroborreliosis.

A 40-year-old male presents to the office with a history of palpitations that last for a few seconds and occur two or three times a week. There are no other symptoms. ECG shows a rare single unifocal premature ventricular contraction (PVC). The most probable cause of this finding is: Select one:

a. Hyperthyroidism
b. Idiopathic or unknown
c. Underlying coronary artery disease
d. Hypertension
e. Valvular heart disease

A 14-year-old teenager suddenly became difficult to concentrate, did not stay still during classes and at home, became restless, irritable, and conflicts with his parents became more frequent. Until then, he was a good student, willingly attended extracurricular activities, had friends, and communicated well with his parents. Can a diagnosis of attention deficit and hyperactivity disorder be made for him? (F90.0 according to the ICD-10 diagnostic criteria) Select one:

a. Cannot, not possible
b. Can, possible

Pacient was treated for late syphilis with three benzathine G (BPG) doses. Initial RPR – 1:64. After 12 months – RPR 1:16. What is your tactic? Select one:

a. Follow-up not necessary
b. Prescribed doxycycline 200 mg/d. 30 d.
c. Repeat testing after 1 month
d. Repeat testing after 3 months
e. Prescribe three more BPG doses

This patient has been diagnosed with medically irreversible severe heart failure due to dilated cardiomyopathy and moderate pulmonary hypertension. Which of the following treatment strategies are correct for this patient? Select one or more:

a. Heart transplantation
b. Results of any surgical treatment are unfavorable for the patients with medically irreversible severe Heart Failure and moderate Pulmonary Hypertension, only palliative treatment is offered
c. In case of worsening patients' condition, he may be considered for Left Ventricular Assist Device implantation as a "bridge for transplantation" it also may benefit Pulmonary Hypertension
d. for the patients with medically irreversible severe Heart Failure and moderate Pulmonary Hypertension Left Ventricular Assist Device implantation as a "bridge for transplantation" cannot be considered as pulmonary hypertension is always irreversible process
e. In patients with severe Heart Failure with moderate Pulmonary Hypertension Heart Transplantation is not performed

A 62-year-old man was admitted to the emergency department after syncope. On inspection- diffuse paleness, rare slow pulse, elevated blood pressure, pulse pressure is lowered. On auscultation a harsh systolic murmur at the aorta extending to the neck is heard. The ECG shows signs of hypertrophy of the left ventricle, the left bundle branch block. What diagnoses are the least likely and WRONG? Select one or more:

a. Mitral regurgitation
b. Aortic stenosis
c. Aortic regurgitation
d. Mitral stenosis
e. Pulmonary regurgitation

A 25-year-old patient came to the emergency department because of severe throat pain, more on the left side, trismus, difficulty swallowing, and fever. Sore throat lasts about a week, treated with nonsteroidal anti-inflammatory drugs. Visual asymmetry of soft the palate, redness of the palate tonsils, displacement of the left tonsil towards the midline. Palpation - enlarged lymph nodes in the neck on the right. Larynx is normal. What pathology would you suspect? Select one:

a. Parapharyngeal abscess
b. Floor of the mouth abscess
c. Epiglottitis
d. Peritonsillar abscess
e. Retropharyngeal abscess

67 years old male admitted to urgencies department with severe lower abdominal pain. Patient is not able to pass urine for 8 hours. Physical examination: palpable, enlarged, painful urinary bladder. Temperature-normal. DRE- prostate enlarged, not painful, 80 ml size. Sonoscopy: full urinary bladder, bilateral hydronephrosis. HgB- 150 g/l Clinical diagnosis? Select one:

a. Ureteral stone
b. Ileus
c. Acute urinary retention
d. Severe peritonitis
e. Prostatitis

A 22-year-old woman has complained of a painless nodule on the lower lip for the last 3 months. The patient was examined. The received research answers were as follows: TPHA – 4+, RPR – 1:16. What is the clinical diagnosis? Select one:

a. Acquired late tertiary syphilis
b. Acquired early secondary syphilis
c. Acquired early primary syphilis
d. Acquired early latent syphilis
e. Congenital early syphilis

The bacteria enter through skin/mucosa and cause:
⭐ a painless chancre

Primary bc single painless lesion. Secondary = systemic spread, tertiary = late organ damage

What is the main method for diagnosing a groin hernia? Select one:

a. Patient clinical examination
b. Magnetic resonance imaging
c. Ultrasound examination of the abdominal wall
d. Laparoscopy
e. Abdominal x-ray

A 54-year-old male presented with dyspnoea on mild physical activity, fatigue, sleepiness, snoring at night, periodically – cough. 25-year smoking history, works as a long distance driver. Comorbidities – diabetes mellitus, primary arterial hypertension, chronic obstructive pulmonary disease (COPD), gastroesophageal reflux. Taking medicines for arterial hypertension and diabetes mellitus. Periodically – fenoterol and ipratropium bromide (Berodual) 1–2 breaths on dyspnoea exacerbation. Physical examination: respiratory rate 16 times per minute. Wheezing on auscultation, peripheral edema. Height – 164 cm, weight – 94 kg. No other findings. What would be your following steps? Which answer is incorrect? Select one:

a. I suspect that COPD treatment is inadequate. I prescribe a combination of a long-acting muscarinic receptor antagonist and a long-acting beta 2 agonist (in one inhaler). I recommend continuing to take the combination of fenoterol and ipratropium as needed. I assign control after 3 months.
b. I suspect there are already signs of heart failure. In addition, I prescribe a diuretic. I refer the patient to a cardiologist for consultation.
c. I suspect that the patient has sleep apnea and/or obesity hypoventilation. I refer the patient to a pulmonologist for consultation.
d. I suspect there is an exacerbation of COPD. In addition, I will prescribe oral amoxicillin with clavulan r. 875/125 mg 3 times daily for 7 days and oral prednisolone 20 mg for 5 days. Then – order spirometry.
e. I suspect that control of arterial hypertension is inadequate. I change medications for high blood pressure, adjust their dose. I appoint a control after 1 week.

A patient was admitted to the emergency department due to fever, nausea and vomiting lasting few days. He was confused, disorientated with cold, sweaty skin, had body temperature – 39,0°C, arterial hypotension – 80/65 mm Hg, heart rate – 136 k/min., and altered peripheral perfusion. SpO$_2$ – 80%. Arterial blood analysis: pH – 7,18; BE – -18 mmol/l; lactate – 6 mmol/l, haemoglobin – 100 g/l. The diagnosis of community acquired pneumonia was confirmed. What therapeutic intervention is needed to correct acute circulatory failure? Select one:

a. Administer crystolloids infusion at least 30 ml/kg in three hours.
b. Administer red blood cells transfusion.
c. Start norepinephrine infusion 0.6 micromol/kg/min.
d. Administer colloids (hydroxyethylstarch, dextran) infusion 1000 ml.
e. Start dopamine infusion 15 micromol/kg/min.

This patient is in Septic shock from community-acquired pneumonia.
The FIRST step to correct acute circulatory failure in septic shock is aggressive IV crystalloid fluid resuscitation.

A 75 year old woman has been feeling a pronounced shortness of breath since last night, and has been briefly unconscious this morning. It is known from the anamnesis that surgery was performed 1 month ago due to breast oncological disease, swollen and painful right calf for about 1 week. What tactics are most appropriate? Select one:

a. INR test, complete blood count,CRP, INR + Lower extremity venous ultrasound
b. Perform CT pulmonary angiography
c. Brain CT
~~d. D-dimer + Lower extremity venous ultrasound~~
e. Fibrinolysis

has Pulmonary embolism from a deep vein thrombosis after recent cancer surgery.

Following lumbar puncture for neurosyphilis, the reported results: WBC normal, protein 0,6 g/l, VDRL positive, TPHA negative. Patient has no neurological deficit, no lesions on the body. Blood RPR 1:8. Your diagnosis? Select one:

a. Asymptomatic neurosyphilis
b. Secondary syphilis
c. Latent syphilis
d. Parenchimal neurosyphilis

A 55-year old male developed Angina-like Chest Pain and ECG changes at the time of Cardiac Stress test. A coronary angiogram demonstrated triple vessel Coronary Artery Disease with 50% stenosis in his Left Main Stem coronary artery. Which treatment strategy would you recommend? Select one or more:

a. Complete revascularization is the optimal strategy in this case Coronary Artery Bypass Graft surgery (CABG)
b. This patient should be on high-dose statin for size reduction of intracoronary plaques unless persistent angina develops
c. A staged Coronary Artery stenting may be considered if the patient refuses CABG
d. As the patient has been asymptomatic, only medical management is necessary
e. An urgent Percutaneous Coronary Intervention and stenting of the Left Main Stem must be undertaken as this is a life-threatening condition

A 24-year-old G1P0 is in labor at term with epidural analgesia in place. Upon reaching complete cervical dilatation, she pushes for 3 hours and 15 min. Exam shows occiput transverse presentation at + 1 station. There is no evidence of fetal distress or infection. Contemporaneous guidelines would favor which mode of delivery? Select one:

a. Await spontaneous vaginal delivery
b. Midforceps
c. Vacuum extraction
d. Await spontaneous vaginal delivery for 45 min and if no progress – caesarean delivery
e. Caesarean delivery immediately

A 19 years old man, previously healthy with no smoking history, 4 hours ago has suddenly developed an acute pain in the right chest and dyspnea. He was admitted to the emergency department. Height 192 cm, weight 63 kg (body mass index 17). On auscultation there was no breathing sounds on the right side, normal breathing on the left. Respiratory rate 32/min, pulse rate 88/min, blood pressure 120/70 mmHg. Saturation (SpO2) with pulse oximeter 87 % (without oxygen). On the chest X-ray – air in the right pleural cavity, totally collapsed right lung and mediastinum shifted to the left. What pathology would you suspect? Select one:

a. Acute myocardial infarction
b. Intercostal neuralgy
c. Spontaneous pneumothorax
d. Acute pneumonia
e. Spontaneous esophageal rupture

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a. Thoracoscopy and chemical pleurodesis (with talc)
b. Drainage of the pleural cavity (chest tube insertion)
c. Emergency right sided thoracotomy
d. Systemic analgetics, oxygen therapy and observation
e. Intercostal nerve blockage and oxygen therapy

52 years old female patient presented to the ENT specialist because of the hoarseness, which occurred after thyroid surgery. During laryngoscopy you see left vocal cord in the paramedial position. Which of these statements are true? Select one or more:

a. You would suspect left vocal cord palsy because of the injury of recurrent laryngeal nerve during thyroid surgery
b. First choice treatment for recurrent laryngeal nerve damage- surgical intervetion as soon as possible- medialisation of vocal cord
c. Most common cause fot reccurent laryngeal nerve damage is idiopathic
d. First choice treatment for recurrent laryngeal nerve damage - conservative thearpy, if it does not help- surgical intervention
e. Most common causes fot reccurent laryngeal nerve damage are iatrogenic

A 55-year-old woman with a history of obesity and multiple previous abdominal surgeries undergoes a challenging laparoscopic right hemicolectomy for a T1N1 carcinoma of the caecum. A drain is left intra-abdominally in the right paracolic gutter. On a postoperative day 1, clear fluid is seen in the drain. The drain fluid is sent for biochemistry, which shows a high creatinine. Which of the following complications has occurred in this patient? Select one:

a. Ureteric injury
b. No complication, it is likely serous fluid
c. Iatrogenic small bowel injury
d. Anastomotic leak

A 57-year old female was admitted to the hospital for a acute myocardial infarction. She underwent coronary angiography and triple vessel coronary pathology was established with total occlusion of the anterior descending artery. Patient underwent successful percutaneous recanalization of the anterior descending artery and stenting. After a night spent in intensive therapy unit, patient suddenly developed severe shortness of breath. On auscultation a significant systolic murmur could be heart at the left side of the chest. Which complications of the myocardial infarction most likely patient developed? Select one or more:

a. Rupture of the papillary muscle of the mitral valve
b. Rupture of the interventricular septum
c. Cardiac tumor
d. Acute pulmonary thromboembolism
e. Atrial fibrillation

A 68-year-old woman with type 2 diabetes was well-controlled with metformin 1 mg BID. She was admitted to the intensive care unit due to acute myocardial infarction, glucose level increase to 14 -20 mmol/l. How diabetes treatment should be changed while this patient is treated for acute coronary syndrome? Select one:

a. SGLT2 inhibitor should be added
b. Sulphanylurea should be added
c. Treatment need not to be changed - glucose level will reduce without treatment change
d. Oral medication should be stopped, multiple subcutaneous insulin injections or continuous intravenous insulin therapy should be started
e. GLP-1 receptor agonist should be added

A 62-year-old patient is complaining of gradually decreasing vision over the past year, especially in the left eye. Earlier the patient was using reading glasses, now has no difficulties in reading without them, but noticed distance-vision impairment. The patient is a heavy smoker, has a medical history of arterial hypertension, which is well managed with medications.
On examination: VA RE = 0,6 cc sph (-) 1,75= 0,9
LE =0,3 cc sph (-)3,25D = 0,8
IOP = 17,3mmHg
Both eyes: without inflammation signs, clear corneas, iris surface normal, some yellow opacities in the lens. Fundoscopic view: optic discs are well defined in borders, yellowish-red in colour, increased retinal vein tortuosity is seen, diameter of the veins is normal. Retinal arteries with mild atherosclerosis signs. The center and periphery of the retina without pathological findings. What is your diagnosis? Select one:

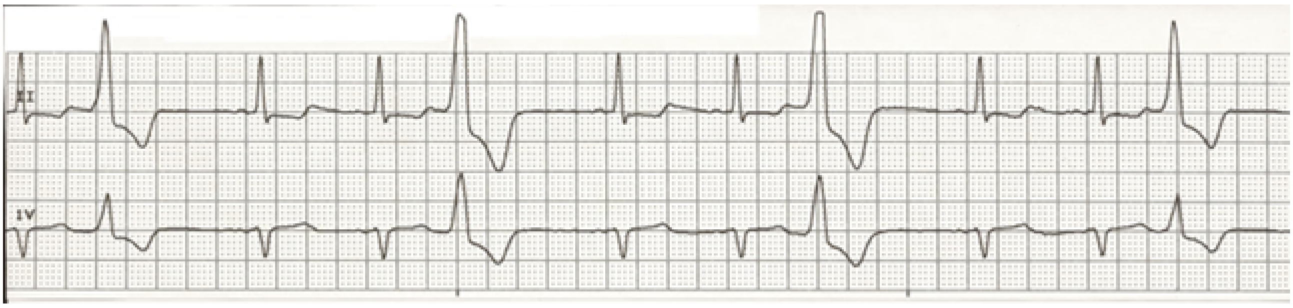
a. Chronic conjunctivitis
b. Reccurent chronic chorioretinitis
c. Nuclear cataract in both eyes
d. Central retinal vein occlusion in the left eye
e. Primary open angle glaucoma

The key clue is the “second sight” phenomenon:
previously needing reading glasses but now reading better while distance vision worsens
due to increasing myopia from nuclear sclerosis.

A mother brings her 13-year-old daughter in to see you because she is experiencing cyclic lower abdominal pain every month that lasts for about 4 days. She is also concerned that the patient has not started her period like most of her classmates, and wants to know if you think this is normal. Physical examination reveals Tanner stage 4 breast and pubic hair development. Vaginal examination shows an intact hymen and a small, nulliparous cervix without lesions. All of the following are formed by the paramesonephric ducts except: Select one or more:

a. Inferior vagina
b. Uterus
c. Fallopian tubes
d. Cervix
e. Ovaries

How you will describe ECG findings presented below.



Select one:

a. triplets of PVC’s
b. none are correct
c. ventricular tachycardia
d. trigeminy of PVC’s
e. couplets of PVC’s
f. bigeminy of premature ventricular contraction’s (beats) (PVC’s)

A 53 years old woman caught a cold and became febrile. She has right chest pain and cough with slight dyspnea. She was treated at home with paracetamol for one week but didn’t get better. So, she went to family doctor. At the family doctor: t-38.5°C, diminished breath sounds on the right chest, no pain on palpation, blood pressure 125/70 mmHg, pulse rate 90/min, respiratory rate 20/min. Blood test: hemoglobin 120 g/l, hematocrit 0.44, white blood cell count $23x10^9$/l, C reactive protein 270 mg/l. On the chest X-ray – partially opacified right hemithorax, because of encapsulated effusion in the right pleural cavity. Pleural ultrasound showed encapsulated effusion with a lot of fibrin septas and masses in it. Chest CT scan – encapsulated effusion in the right pleural cavity, partially compressed right lung, thickened parietal pleura up to 2 mm. What treatment would you suggest for the patient? Select one:

a. Drainage of the pleural cavity (via chest tube), chemical pleurodesis via chest tube and systemic antibiotics
b. Therapeutic thoracocentesis and systemic antibiotics
c. Thoracoscopic empyemectomy and systemic antibiotics
d. Conservative management with systemic antibiotics and analgetics
e. Open empyemectomy (via thoracotomy), lung decortication and systemic antibiotics

This patient has Pleural empyema with loculations/fibrin septations (“complicated empyema”).
Because the pleural fluid is organized and multiloculated, simple thoracentesis or chest tube drainage
alone is unlikely to work — she needs thoracoscopic surgical drainage/decortication plus antibiotics.

What is this disorder?
The patient was 25 years old, hospitalized for the first time. She has not been treated with antipsychotics before. The patient was brought to the ward on a stretcher. The patient lies in a numb, indifferent facial expression, her gaze blurred at one point. Her pupils respond well to light, not to pain. The patient does not speak, does not make any requests, saliva accumulates in the mouth, leaking over the edge of the lips. The doctor raised the patient's hand. She has been in that awkward position for a long time. The doctor pulled out the pillow of the lying patient. Her head hangs in the air. The patient did not eat, urinated under himself. Select one:

a. Depression
b. Sopor
c. Meningitis
d. Catatonia
e. Dementia

An unidentifiable patient arrives at the emergency department due to a motorcycle accident. The patient has a significant amount of internal bleeding. It is determined the patient is bleeding from the spleen and needs to undergo a splenectomy. The splenic artery which supplies the spleen branches is compromised by the hematoma. Which vessel is occluded by the hematoma that also supplies the splenic artery?
Select one:

a. Inferior mesenteric trunk
b. Common hepatic artery
c. Superior mesenteric trunk
d. Celiac trunk

Suddenly, 4 hours ago heavy after drinking of alcohol with food acute severe abdominal pain occured. Abdomen is painful and distented. Which study will you choose first for differential diagnosis? Select one:

a. Ultrasound abdominal examination
b. Radiological examination of the stomach with barium sulphate liquid solution
c. X-ray of the abdominal cavity
d. Computer tomography of abdominal organs
e. Ezofagogastroduodenoscopy

The peripheral blood smear of a 51-year-old male with a Hgb of 92 g/L (reference value 128-160 g/L), WBC count of 1,500/µL (reference value 4,000-9,800/µL), and MCV 132 fL (reference value 78-96 fL) will most likely show: Select one:

a. Hypochromic and microcytic RBCs
b. Blasts
c. Nucleated red blood cells
d. Schistocytes
e. Hypersegmented neutrophils and macroovalocytic RBCs

This patient has severe macrocytic anemia with pancytopenia, most consistent with Megaloblastic anemia. The classic blood smear shows macro-ovalocytes and hypersegmented neutrophils.

Patient is chronically ill and asks a head of the department to change his physician, he is also looking for help of extraordinary healers, religion (starts praying more than before). At what stage of grief by Elizabeth Kübler Ross patient is: Select one:

a. anger
b. denial
c. bargaining (negotiation)
d. depression

A 38-years-old woman after ultrasound examination was diagnosed a 4 cm size node in the thyroid gland. Biochemical blood test: TTH <0.4, LT4 - within the normal range. What are the next steps? Select one:

a. Thyroidectomy
b. Endocrinologist surveillance
c. Hemithyroidectomy with the node
d. Thyroid gland scintigraphy
e. Nodal thin needle aspiration puncture and cytology examination

Thyroid scintigraphy is a scan that shows how ACTIVE different parts of the thyroid gland are by measuring uptake of radioactive iodine or technetium.

55 years old patient presented to the emergency department because of the nose bleeding. He uses anticoagulants. On the examination use see the bleeding from the anterior part of the nose and decide to tamponade the nose. Choose the correct answers about nose bleeds. Select one or more:

a. Most bleedings occur in the anterior part of the nose
b. Blood flow on the posterior wall of the pharynx is usually absent in posterior epistaxis
c. Usually, bleeding starts from anterior ethmoidal artery
d. Posterior epistaxis less dangerous than the anterior nosebleed
e. Posterior epistaxis consists less than 10 % of whole nosebleeds

Patient is diagnosed with acute schizophrenia and treatment with haloperidol is initiated. Shortly patient develops severe muscle cramps with torticollis and other Parkinson disease like symptoms. What is the most appropriate solution? Select one:

a. Discontinue haloperidol and observe patient
b. Increase the dose of haloperidol
c. Continue haloperidol and add central acting antimuscarinic drug
d. Add another antipsychotic to drug regimen
e. Discontinue haloperidol and give drug for Parkinson disease treatment

You are completing the discharge summary for a patient who has undergone primary angioplasty with drug eluting stent for an anterior myocardial infarction. The patient questions you regarding the duration of antiplatelets. What is your advice? Select one:

a. Clopidogrel (or ticagrelor) is adequate long term
b. Clopidogrel (or ticagrelor) for 1 month and aspirin long term
c. Dual antiplatelets (aspirin + clopidogrel or aspirin + ticagrelor) long term
d. Aspirin for 1 month and clopidogrel (or ticagrelor) long term
e. Dual antiplatelets (aspirin + clopidogrel or aspirin + ticagrelor) for 12 months and then aspirin long term

A 32-year-old man. No complaints. During the prophylactic examination, a chest x-ray, then a computer tomography (CT), showed numerous small nodules in both lungs, more in the upper and middle parts. No other changes on CT. Physical examination is normal. He has no fever. The patient has been smoking for 15 years, 20 cigarettes a day. What are your next steps? Which answer is correct?
Select one:

a. I suspect lung tuberculosis. I will perform a sputum test for tuberculosis mycobacteria.
b. I suspect a smoker's chronic bronchitis. I will perform a spirometry for possible bronchial obstruction.
c. I suspect cancerous metastases in the lungs. I will perform fibrobronchoscopy with BAL. I will send the BAL fluid for a cytological test. If the diagnosis is not clear (no cancer cells will be found in the cytology), I will perform an endobronchial ultrasound guided mediastinal lymph node biopsy (EBUS) and a fibrobronchoscopy with lung biopsy.
d. I suspect lung sarcoidosis. I will perform fibrobronchoscopy with bronchoalveolar lavage (BAL). I will send the BAL fluid for immunological, cytological tests and examination for mycobacteria. If the diagnosis is not clear, I will perform a fibrobronchoscopy with lung biopsy
e. I suspect lung tuberculosis. I will perform a fibrobronchoscopy with a bronchoalveolar lavage (BAL). I will send the BAL fluid for tuberculosis mycobacteria tests (microscopy and culture). If mycobacteria are not found, I will perform a fibrobronchoscopy with lung biopsy.

A 58-year old male presented with a half- year history of palpitations and shortness of breath on exertion. A year ago he had an episode of ischaemic stroke with no residual disability. What investigations are necessary to confirm or rule out the diagnosis of mitral valve regurgitation and atrial fibrillation? Select one or more:

a. Electrocardiography (ECG)
b. Echocardiography
c. Ultrasound of the Deep Lower Extremity Vein
d. Abdominal ultrasound
e. Computed tomography of the chest

Upon the examination of a cadaver, a spindle-shaped wound, 2 cm length, with smooth edges and pointed ends, was observed on the left side of the chest. The channel of the wound extended into the thoracic cavity with a visible linear, penetrating injury of the left ventricle. It was concluded that the injury could have been done using a knife found at the scene. What type of wound is described? Select one:

a. avulsion
b. chop wound
c. stab wound
d. incision
e. laceration

What is a psychopathological syndrome?
The patient is 40 years old, does not work anywhere, lives with his mother. For him, the disease began at the age of 27. The patient had recurrent psychotic episodes, which became more frequent and were treated several times in a psychiatric hospital. During the last hospitalization, the patient is clumsily dressed, suspicious, tense, hostile, angry, reluctant to speak, refuses to say that "you know everything", thinking is scattered. It is possible to find out that the patient interacts with the world of the dead in "whispers", broadcasts his thoughts on television, hears the voices of aliens, the voices of aliens are sheep, they expose him to radiation, cause various pains in the body, control movements. The patient cannot resist the ufonauts, they have "partnerships" with them, they communicate with their thoughts. Uncritical of his condition, came to heal due to the resulting weakness, fatigue. Select one:

a. Persecutory delusion
b. Cotard delusion
c. Kandinsky Clerambault syndrome
d. Delirium
e. Oneiroid syndrome

This patient has Kandinsky-Clérambault syndrome.
The hallmark is the belief that outside forces control thoughts, movements, sensations, and actions.

A 72-year old female is complaining of Shortness of Breath. Three months ago she had a Fever with the body temperature at 38, 4°C, she was treated with Antibiotics, resulting partial reduction of the symptoms. What investigation you will order to rule out or confirm infective endocarditis? Select one or more:

a. Ultrasound of the chest.
b. Computed Tomography of the chest.
c. Blood microbiology cultures.
d. Magnetic Resonance Imaging Tomography of the chest.
e. Transthoracic echocardiography

32 years old male complains with the high blood pressure (BP) and muscle weakness. His morning BP at home is up to 150/90 mmHg and evening BP is up to 170/110 mmHg. He does not take any medications for hypertension. Clinical investigations: left ventricle hypertrophy on ECG; biochemistry tests: sodium 142 mmol/l, potasium 3.0 mmol/l, chloride 108 mmol/l. Abdominal ultrasound: right adrenal tumor in suspicion. What is the likely cause of hypertension? Select one:

a. Stenosis of a. renalis
b. Primary hyperaldosteronism
c. Cushing syndrome
d. Primary arterial hypertension
e. Pheochromocytoma

You are called to see a 75-year-old female who underwent a low anterior resection for rectal cancer 6 days ago. She has been complaining of pain in her left leg over the past couple of days and has been slow to mobilize. She suddenly has an episode of collapse with tachycardia, hypotension and tachypnoea. Choose the single most likely diagnosis:

a. Peritonitis
b. Pulmonary embolism
c. Acute respiratory distress syndrome (ARDS)
d. Wound infection
e. Systemic inflammatory response syndrome (SIRS) infection

A 72-year-old man was operated for the recurrent right side inguinal hernia. Bassini operation was performed previously 20 years ago. Now, due to recurrence of the hernia, the Lichtenstein operation was performed. During this operation, a lateral hernia with a gate size of about 2.5 cm was diagnosed. The postoperative diagnosis should be written in accordance with the requirements of the EHS groin hernia classification. Which option is correct?

a. PL1M0F0
b. RL1M0F0
c. PL2M0Fx
d. PL2M1Fx
e. RL2M0Fx

A 77-year-old male complains of weakness (started 6 months ago with no change). Approximately 6 months ago he was diagnosed with cancer of the right lung. Surgical treatment (lobectomy) and postoperative chemotherapy were completed. After the 2nd course of chemotherapy, a computed tomography (CT) was performed and pulmonary embolism (PE) of both lungs in the lower lobes was diagnosed. In previous CT scans (performed 6 months and 2 months ago) no signs of PE where seen. His performance status is good. Arterial blood pressure 115/65 mmHg, heart rate 80 times per minute. Normal breath sounds on auscultation. There is no evidence of right heart overloading, the troponin and brain natriuretic peptide (BNP) levels are normal. What treatment will you prescribe? Which answer is correct? Select one:

a. I will prescribe an oral indirect anticoagulant (warfarin).
b. I will distinguish between intravenous heparin and intravenous thrombolysis. Then an oral indirect anticoagulant (warfarin).
c. I will not prescribe adjunctive therapy because there are no clinical signs of PATE or symptoms of heart damage.
d. I will distinguish between intravenous heparin and intravenous thrombolysis. Then - low molecular weight heparin subcutaneously
e. I will administer low molecular weight heparin subcutaneously or a new anticoagulant (apixaban, rivaroxaban, etc.)

30-year-old female presents with blisters on the skin that easily break and erosions on the oral mucosa. Skin biopsy shows an intraepidermal blister on histological examination. What is the most likely diagnosis?

a. Pemphigus vulgaris
b. During's dermatitis (Dermatitis herpetiformis)
c. Erythema multiforme
d. Bullous pemphigoid
e. Herpes simplex

What are the biochemical changes in blood serum for secondary hyperparathyroidism? Select one or more:

a. Hypocalcaemia
b. Low vitamin D level
c. Hypercalcaemia
d. High levels of parathyroid hormone
e. Hyperphosphataemia

Secondary hyperparathyroidism usually occurs because of chronic kidney disease or vitamin D deficiency. The classic biochemical pattern is:
⬇️ calcium, ⬇️ vitamin D, ⬆️ PTH, and often ⬆️ phosphate.

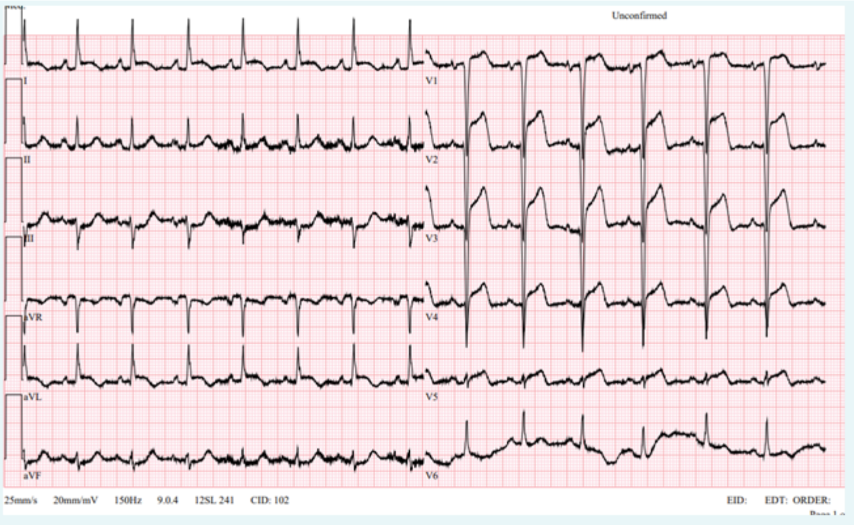
PTH normally increases when calcium is low.

In secondary hyperparathyroidism:
➡️ another disease causes chronic low calcium
➡️ parathyroids respond by producing MORE PTH.

48 year old male is presented to Emergency department with severe general weakness, vomiting with coffee grounds content. On examination the patient is pale, breaking in sweat, blood pressure at 85/60mmHg, pulse 112 beats/minute, abdomen without signs of peritonitis, tenderness in the epigastric region, rectal examination shows melena. A bleeding peptic ulcer is suspected. Which steps should be taken before an early endoscopy? Select one or more:

a. Infusion of proton pump inhibitors
b. Laboratory workup (full blood count, electrolytes, renal function tests, coagulation parameters)
c. Infusion with crystalloids
d. Blood transfusion if indicated
e. Computerized tomography angiography

55-years-old male patient presented to emergency department with severe chest pain 4 h after the onset. Patient had history of hyperlipidemia, hypertension, no previous history of CAD. On physical examination BP 140/75 mmHg, HR 82 bpm, no evidence of pulmonary congestion. What would be the most likely findings on the invasive coronary angiography?



The patient had an anterior-wall STEMI caused by Left anterior descending artery occlusion. The ECG changes in anterior leads are what point you specifically to the LAD.

Select one:

a. No lesions in coronary vessels – this is pericarditis
b. Left circumflex artery (Cx) occlusion
c. Left anterior descending artery (LAD) occlusion
d. Right coronary artery (RCA) occlusion
e. Three vessel disease

A patient being mechanically ventilated in the ICU requires wound debridement twice daily. Each of the following agents would be appropriate for induction of brief general anesthesia except: Select one or more:

a. Ketamine
b. Rocuronium
c. Etomidate
d. Thiopental
e. Propofol

A cadaver, about 50-year-old, was recovered from the lake. Estimated post-mortem interval was 1-3 days. Upon external examination, large amount of froth was observed around the nose and the mouth and in the airways; livor mortis was of pink colour. Autopsy revealed relatively heavy lungs with pulmonary edema, superficial imprints of the ribs and diffuse subpleural pink-violet hemorrhages („Paltauf's spots“). Diatoms were detected in bone marrow samples. These findings are typical to: Select one:

a. „dry“ drowning
b. any type of drowning
c. these findings are atypical to drowning
[✓ d. „wet“ drowning]
e. cold-shock response due to water submersion

A 44-year-old man was admitted to the hospital due to painful urination, weakness, nausea. No chronic diseases in his life. His labs showed proteinuria, hematuria, elevated level of urea 23 mmol/l and creatinine 640 mkmol/l. According to progressive kidney failure hemodialysis were started. Positive Anti-GBM, pANCA and ANA were found using immunological tests. The diagnosis was confirmed histologically. What changes would you expect in a kidney biopsy for anti-GBM disease? Select one:

a. Glomerular sclerosis
b. Podocytes effacement
c. Nonspecific changes
d. C4d deposits in peritubular capillaries
[✓ e. Crescent formation]

This patient has Anti-glomerular basement membrane disease, a rapidly progressive autoimmune kidney disease. The key clues are rapidly worsening renal failure, hematuria/proteinuria, and positive anti-GBM antibodies.

35 years old woman, manager, has abdominal bloating, gurgitation, abdominal pain. The pain is spastic, its duration is from 30 minutes till few hours. The pain is provoked by nervous stresses. The abdominal pain is releaved after defecation. During the exacerbation of the disease diarrhea is about 2-3 times per day without blood. She has been experiencing these symptoms for about 5 years. Barium enema test: spastic colon, contrast mass in the colon is distributed unevently. What diagnosis is the most likely? Select one:

a. Functional abdominal pain
[✓ b. Irritable bowel syndrome]
c. Functional diarrhea
d. Functional bloating
e. All answers are correct

A 37-year-old woman approached to the Emergency Department. She said that an unfamiliar dog bit her right hand 2 hours ago. The animal looked homeless, aggressive. Woman does not suffer from any chronic diseases, does not have allergies to medication, was vaccinated against tetanus 2 years ago. Objectively: no fever; hemodynamics was stable; on the right forearm was a deep, dirty, bleeding wound. What tactics would you choose? Select one or more:

a. I will treat her only with non-steroidal anti-inflammatory drugs
b. I will invite a surgeon for the wound clearing
[✓ c. I will invite a surgeon for the wound clearing and urgently notify the territorial public health agency]
d. I will invite a surgeon for the wound clearing, and vaccinate her against tetanus with diphtheria/tetanus vaccine Imovax dT
[✓ e. I will immediately start the vaccination against rabies according to the following schedule - at day 0, 3, 7, 14 and 28]

The patient was referred to a geneticist by peadiatric cardiologist due to suspected genetic condition. Patient underwent surgery for tetralogy of Fallot in the first months of his life. At the age of 10 months, surgery of hard and soft palate was performed. Patient has recurrent respiratory tract infections, is under constant follow-up for imunodeficiency. Patient was also tested for hearing deficiency. Parents and teachers observed that patient has learning, concentration difficulties. What genetic disease(s) can be diagnosed? Select one or more:

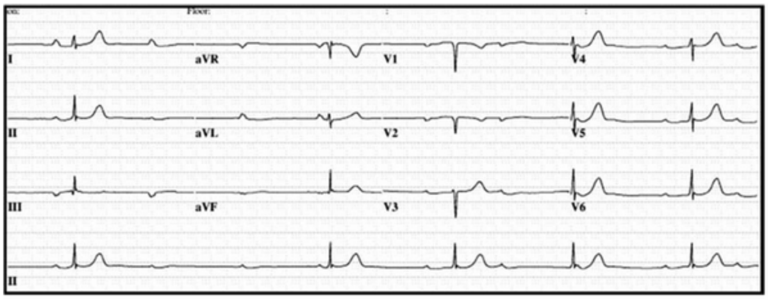
a. 22q11.2 microdeletion syndrome
b. DiGeorge sequence
c. Russel – Silver syndrome
d. Angelman syndrome
e. Wiedemann-Beckwith syndrome;

DiGeorge syndrome is a genetic disorder where parts of the immune system, heart, and face do not develop normally because of a chromosome 22 deletion.

A 67-year-old patient arrived at a hospital emergency department.
Complaints: blindness of the left eye.
Anamnesis morbi: sudden loss of vision occured 5 hours ago.
Anamnesis vitae: a medical history of arterial hypertension, 10 years ago artificial heart valve was implanted. The patient takes antihypertensive drugs irregularly, blood pressure is elevated/ not **compensated**. Patient is a smoker, does not consume alcohol.
Status praesens communis: Class II-III obesity, BP (upon admission) = 205/100 mmHg. Status specialis. Fundus view of the right eye: optic disc appears normal, retinal vessels are attenuated with focal irregularities, arteries are very slim, central part of the retina looks pale and ischaemic, cherry-red spot at the centre of macula is seen.
Outline your diagnosis. Select one:

a. Toxoplasma chorioretinitis
b. Age related macular degeneration
c. Retinitis pigmentosa
d. Central retinal vein occlusion
e. Central retinal artery occlusion

A 17-year-old female presents for a routine gynaecologic appointment. She reports no complaints. She has no known medical history other than a “low heart rate” shortly after she was born. She is not using any medications and denies illicit drug use. Her examination was within normal limits with exception of a low pulse rate at 36 bpm. The following ECG was obtained. What is the most likely diagnosis? Select one:



a. Second degree AV block
b. Normal sinus rhythm without any block
c. Third degree AV block
d. Ventricular tachycardia
e. Supraventricular tachycardia

Third-degree atrioventricular block occurs when NO atrial impulses conduct to the ventricles. On ECG, the hallmark is complete AV dissociation: P waves and QRS complexes occur independently of each other.

23-year-old patient, living in a dormitory, woke up in the morning With a sandy, gritty sensation in his right eye. The patient is also complaining of general malaise and sore throat. Parotid and submental lymph nodes are enlarged.
V both eyes = 1.0
Upper eyelid of the right eye is swollen, small follicles in eyelid conjunctiva, serous discharge. conjunctival injection, mild chemosis, several small ecchymomas.
Both eyes - anterior segment, posterior segment and fundus without pathological changes.
What is the initial preliminary clinical diagnosis?
Select one:

A. Right superior eyelid abscess
B. Toxoplasmic chorioretinitis of the right eye
C. Acute right dacryocystitis
D. Adenoviral conjunctivitis of the right eye.
E. Herpetic keratitis of the right eye.

82 year-old patient is admitted to the emergency department due to chest discomfort. History is positive for arterial hypertension and chronic kidney disease. ECG shows a heart rate of 68 bpm and peaked T-waves. Blood test results include hemoglobine 115 g/l, creatinine 143 µmol/l, potassium 6.4 mmol/l, sodium 143 mmol/l. Which of the treatment options are appropriate for this patient? Select one or more:

a. hemodialysis
b. injection of 10 % Ca chloride
c. infusion of 10 % glucose with insulin
d. infusion of 10 % potassium chloride
e. defibrillation

This patient has dangerous Hyperkalemia with ECG changes (peaked T waves). Treatment priorities are:
1️⃣ stabilize the cardiac membrane with calcium
2️⃣ shift potassium into cells with insulin + glucose.

60 years old women is admitted to family doctor office due to her left knee joint, which has been swelling for the last month. Pain intensity is 6 points from 10 in the VAS score. The recurrent pain in several joints (without swelling) is present for about 3 years. There is no other disease history. Which one of the following treatments You would prescribe at first? Select one:

a. Methotrexate
b. Prednisolone 10 mg/day
c. Non-steroid anti-inflammatory drug and prednisolone 5 mg/day
d. Non-steroid anti-inflammatory drug
e. Intraarticularglucocorticosteroid injection

An 18-year-old young man came to see an allergist, complaining of itchy nose, sneezing, unable to breathe through his nose, bad sleep. Symptoms persist for about 1.5 years. He was taking a variety of anti-rhinitis drugs, which relief symptoms for a short time. What tests can be done to diagnose allergic rhinitis? Select one:

a. X-ray of sinuses.
b. Cytological and bacteriological examination of the nasal secretion.
c. Skin prick tests with allergens.
d. Blood IgE levels.
e. Blood test and CRB.

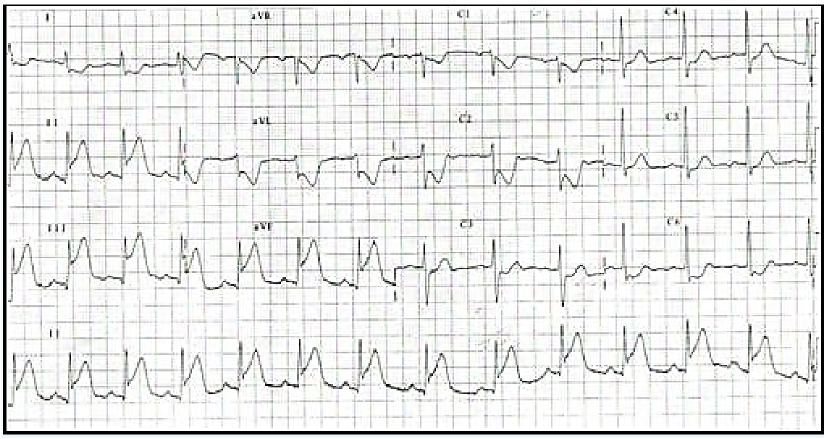
A 62-year old lady presented with Shortness of Breath on minimal exertion, Chest Tightness, and Dizziness. Having rushed incline, she lost Consciousness. What investigations would you request first to rule out or confirm a diagnosis of the aortic valve stenosis? Select one or more:

a. Computed Tomography of the head
b. Computed Tomography of the chest
c. Cardiac echography
d. Magnetic Resonance Imaging Tomography of the head
e. Spirometry and Chest X-ray

A 70-years-old man complains of painful bump in the left groin area wich appeared yesterday and recurring vomiting. Due to above mentioned complaints, he arrived at the hospital Emergency Department at around 18 o'clock. What are the appropriate diagnostic and therapeutic measures to be taken?Select one:

a. Abdominal tomography visual examination
b. The surgery at the next morning if the hernia is not irreponibile
c. Operate as soon as possible, planning hernioplasty with own tissue, since the hernia is incarcerated
d. Transfer the patient for further treatment to a specialized surgical center
e. Operate as soon as possible, planning hernioplasty and mesh placement, since the hernia is incarcerated

A 74-year-old man was admitted to the ED because of chest pain that started 1 hour ago. He is now pain free, following morphine that was administered in the ambulance. He had a right-sided cardioembolic stroke 3 yrs ago and has minimal residual left arm weakness. ECG was performed. What is the diagnosis?



Select one:

a. Unstable angina
b. Acute perimyocarditis
c. Acute inferior ST segment elevation MI
d. Acute anterolateral ST segment elevation MI
e. Diagnosis is unclear – additional information is needed

A patient was treated in the Intensive Care Unit because of polytrauma. He spent 2 weeks with artificial lung ventilation: at the beginning via endotracheal tube, later via tracheostomy tube. 3 weeks after the discharge from the hospital patient felt dyspnea and a sound while breathing (stridor). What examination should be done, that would be valuable for diagnostics and for the treatment at the same time? Select one:

a. Chest CT scan
b. Fibro-optic bronchoscopy
c. Mediastinoscopy
d. Chest anterior-posterior X-ray
e. Rigid bronchoscopy

A 25-year-old man was assaulted, was unconscious for several minutes after a direct blow to his head. He is Glasgow Coma Scale 15 on examination, headache, nausea, no focal neurological signs revealed. CT scan of the head – no traumatic changes. Diagnosis: Select one:

a. Diffuse axonal injury.
b. Concussion.
c. Post-traumatic confusion
d. Shaking-impact syndrome.
e. Brain contusion.

A 78-year-old woman with a history of chronic bronchitis develops diarrhea. She is a nursing home resident, and the diarrhea is profuse, with episodic blood, watery, with up to 8-10 bowel movements per day. Initial physical examination in the Emergency Department shows a distended, tender abdomen (mostly in lower part), intestinal peristalsis active, no signs of hepatomegaly. Further exploration of the patient's medical history indicates that she was recently on antibiotics (Amoxicillin 875 mg et Clavulanic acid 125 mg TID, for 7 days) for an exacerbation of chronic bronchitis. Before the start of diarrhea, the patient ate the food only at nursing home. Other residents did not develop diarrhea. What is your diagnosis? Select one:

a. Shigellosis
b. Rotavirus infection
c. Salmonellosis
d. *Cl. difficile* enterocolitis
e. Norovirus infection

Clostridioides difficile infection occurs when antibiotics kill normal intestinal bacteria.

This allows:
🦠 C. difficile to overgrow and produce toxins.

The toxins cause:
🔥 colonic inflammation
➡️ severe diarrhea/colitis.

You have been looking after an obese 55-year-old man with a history of hypertension, who was admitted with an non-ST-segment elevation myocardial infarction (NSTEMI). Apart from optimizing his antihypertensive medication, which one of the following would be appropriate lifestyle advice measures for improving his blood pressure? Select one:

a. Regular exercise
b. Stress management
c. Reduction of his salt intake
d. Weight loss
e. All of the above → wrong

A 35 years old female presented with one month history of foggy vision and floaters in her right eye. No pain. She felt similar symptoms 2 years ago. Social history: teacher; lives with two cats.

- Status ophthalmicus:
  - Best corrected visual acuity
  - Oculus dexter = 0.2
  - Oculus sinister = 1.0
- Intraocular pressure:
  - Oculus dexter = 16 mmHg
  - Oculus sinister = 15 mmHg
- Slit lamp examination:
  - Oculus dexter: anterior segment unremarkable, severe vitritis. Opthalmoscopy: a fluffy white retinal lesion temporally to macula associated with a pigmented scar.
  - Oculus sinister: unremarkable.

What is the likely diagnosis and treatment? Select one:

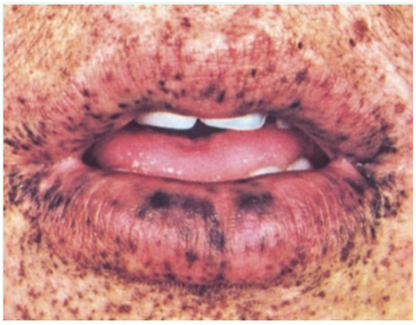
a. Choroidal melanoma. Brachytherapy
b. Panuveitis. Systemic antibiotics and mydriatics
c. Intermediate uveitis. Local steroids and mydriatics
d. Age related macular degeneration. Vascular endothelial factor inhibitors intravitreally
e. Posterior uveitis. Etiological treatment, systemic steroids, local mydriatics

This patient has classic Ocular toxoplasmosis causing posterior uveitis. The hallmark is a fluffy white retinal lesion adjacent to an old pigmented scar with severe vitritis (“headlight in the fog”).

50-year-old man participated at the party and ate a lot and drank a lot of alcohol. After the party felt badly, had nausea and a couple of episodes of vomiting. Just after the vomiting suddenly felt a severe pain in the chest and epigastrium. Afterwards the general condition deteriorated very quickly, patient felt weakness, sweating, and permanent chest pain. So, he was admitted to the emergency department. On admission: blood pressure 150/90 mmHg, pulse rate 12/min, respiratory rate 18/min. Diminished breath sounds in the left chest on auscultation. Heart sounds normal and rhythmic. Subcutaneous emphysema in the neck on palpation. What pathology would you suspect? Select one:

a. Spontaneous esophageal rupture (Boerhaave syndrome)
b. Perforated ulcer of the stomach
c. Acute gastroenteritis
d. Acute myocardial infarction
e. Mallory-Weiss syndrome

36 year old man patient presented with bluish-gray spots on the upper and lower gums and the buccal mucosa. He has a history of recurrent abdominal pain. What are you see in this picture and what is your diagnosis, possible findings associated with this disease? Select one or more:



a hereditary condition causing dark pigmented spots on the lips/oral mucosa and hamartomatous GI polyps that lead to recurrent abdominal pain and increased cancer risk.

The oral “freckle-like” pigmentation + abdominal symptoms is the classic exam combination.

a. Osler-Weber-Rendiu disease
b. Telangiectasis in mouth
c. Peutz-Jeghers syndrome
d. Severe mucocutaneus pigmentation and melanin spots similar to freckles
e. Increased risk of Hamartomatous polips in bowel, intestinal cancer

looks like Peutz on his mouth

A patient after the fall from height was admitted to the emergency department. He is in coma due to subdural hematoma confirmed by head CT scan. Massive bleeding to the peritoneal cavity and haemorrhagic shock were diagnosed. What a target blood pressure is recommended in case of haemorrhagic shock and severe traumatic brain injury until bleeding control during laparotomy? Select one:

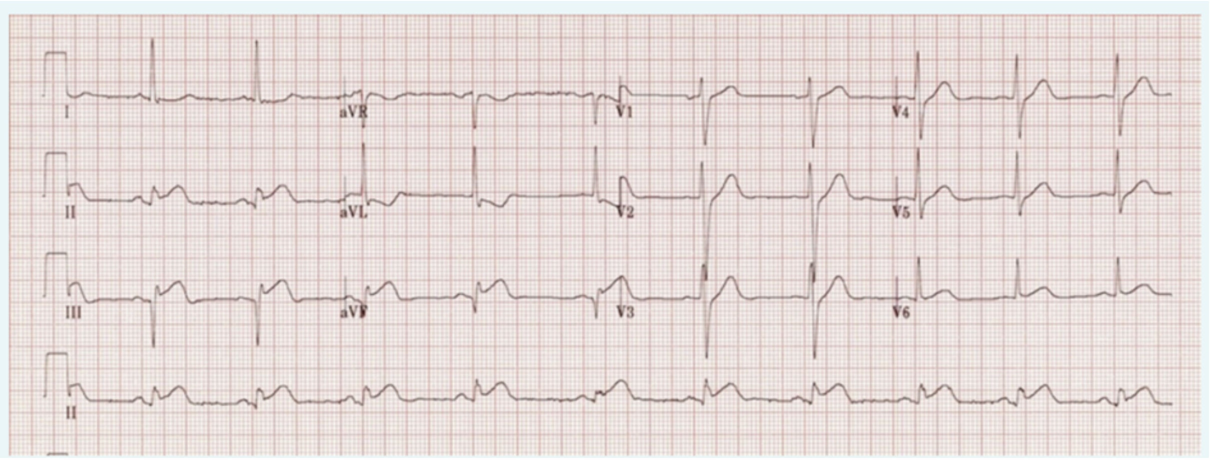
a. Mean arterial pressure > 100 mm Hg.
b. Mean arterial pressure > 70 mm Hg.
c. Mean arterial pressure ≥ 80 mm Hg.
d. Systolic arterial pressure > 100 mm Hg .
e. Systolic arterial pressure ≥ 90 mm Hg.

patient has two competing problems: 🚨 hemorrhagic shock (where we usually tolerate lower BP to avoid worsening bleeding) and 🚨 severe traumatic brain injury (where the brain absolutely needs adequate perfusion).
Because brain perfusion must be protected in severe TBI, the BP target is higher than standard permissive hypotension, making MAP ≥ 80 mmHg the best answer.

A 79-year-old woman with chronic obstructive pulmonary disease and a 40-pack-year history of cigarette smoking reports 3 months of right shoulder pain that radiates down her arm and muscle wasting of the right hand. The patient denies trauma. Which of the following usual tests are appropriate to evaluate this patient’s symptoms? Select one or more:

a. Radiographs of the cervical spine
b. MRI of the right shoulder
c. Chest radiograph
d. Radiograph of the right shoulder
e. CT of lung

A 64-year-old Caucasian male with a history of extensive tobacco use, hypertension, hyperlipidemia, and obesity presents with acute onset chest pain. On arrival, the EKG shown below was obtained: Emergency coronary angiography revealed complete occlusion of the culprit vessel. Percutaneous coronary intervention was unsuccessful and the plan was for medical management. Forty-eight hours after initial presentation, while in the coronary care unit, he suddenly became very dyspneic. His exam was notable for tachycardia, elevated jugular venous pressure, diffuse rales, and an early 2/6 systolic murmur loudest at the cardiac apex. Which of the following is most likely to account for his acute decompensation? (SCQ)



a. Ventricular septal rupture
b. Hyperdynamic ventricle
c. Pericardial effusion
d. Acute mitral regurgitation → *passt zum systolischen Murmur; würde sich durch ischämisch bedingten Papillarmuskelabriss erklären lassen*
e. Severe mitral stenosis

This is acute mitral regurgitation after myocardial infarction, most likely from papillary muscle rupture/ dysfunction 2–7 days after MI. It causes sudden pulmonary edema, dyspnea, rales, JVP elevation, and a new systolic murmur at the apex.

A 59-year-old man admitted to emergency department for weakness of right arm and leg and disturbance of speech. The symptoms occurred 1 hour ago. Patients is taking warfarin due to permanent atrial fibrillation. On exam, blood pressure is 160/90 mmHg, heart rate 80 beats per minute. On neurological examination, patient is alert. Cerebral nerves: paresis of right low part of face. Right hemiplegia. Tendon reflexes increased in right extremities, positive Babinski sign on the right. Right hemihypesthesia. No meningeal signs. Non-contrast brain CT is normal, CT-angio – thrombosis of proximal part of left middle cerebral artery. Blood test is normal serum glucose 6.8 mmol/l, INR 2.6. What kind of reperfusion treatment could be recommended for this patient? Select one:

a. Warfarin must be discontinued, and heparin therapy must be initiated.
b. Any reperfusion therapy is not acceptable.
c. Intravenous thrombolysis and/or mechanical thrombectomy.
d. Intravenous thrombolysis if mechanical thrombectomy is not available.
e. Mechanical thrombectomy.

This patient has an acute Ischemic stroke from a left MCA occlusion due to atrial fibrillation. Because his INR is 2.6, IV thrombolysis is contraindicated, but mechanical thrombectomy is still indicated for a proximal large-vessel occlusion.

The 37-year-old past healthy woman was admitted to the emergency room with pleural-type chest pain that started the night before, improving with leaning forward. No fever / no tachycardia. Chest X-ray and ECG were performed within normal limits. C reactive protein, - 5 mg / l. Next day: 58 mg / l (norm < 5). Troponin I in 3 samples: (pg / ml): 58 - 34 - 28 (norm <15.6). Normal heart echo. What diagnosis do you suspect? Select one:

a. Coronary heart disease
b. The onset of herpes zoster
c. Esophagitis
d. Myocarditis
e. Intercostal neuralgia

A 37-year old man who was diagnosed with HIV infection 4 years prior to presentation but taking care irregularly and never prescribed antiretrovirals, presented with fever, dry cough for 15 days, and shortness of breath on exertion started 7 days before.
On physical examination, his temperature was subfebrile and he had oral thrush and redness of face with patches of greasy skin covered with flaky white scales. Initially, his pulmonary examination and chest radiography were both unremarkable. However, over the next several days his fever progressed and he developed increasing cough and dyspnea at rest, and the chest radiography revealed diffuse bilateral infiltrates extending from the perihilar region. Which preliminary diagnosis should be suggested first? Select one:

a. Pulmonary histoplasmosis
b. Pneumococcal pneumonia
c. *Candida* pneumonia
d. *Pneumocystis jirovecii* pneumonia JIR = HIV
e. Pulmonary tuberculosis

The patient complains that 15 minutes ago lips started to swollen, feels pharyngeal congestion, difficulty swallowing and breathing. Symptoms started after being stung by a bee. Objective examination shows swollen lips, tongue, it is difficult to speak. On lung auscultation - vesicular breathing. First I will prescribe treatment ... Which statement is correct? Select one:

a. Freshly frozen plasma.
b. Antihistamine.
c. Prednisolone.
d. Salbutamol.
e. Adrenaline.

A 61-year-old patient arrived to the Memory clinic with his son accompanying him. The patient claims that he had seven strokes, but later fully recovered. The son says that the changes occurred in the patient's language - the lack of words, the patient speaks rarely and is not able to name even simple objects. The patient began to behave strangely and inappropriately. The first signs of the disease appeared a year ago. The patient's condition gradually deteriorates. Physical and neurological examination: Arterial blood pressure - 130/84 mm Hg, heart rate - 72 beats/min. The state of consciousness normal. Symptoms of motor aphasia. Pathological grasp reflexes present. No other neurological signs. Meningeal symptoms absent. MMSE - 24 points. What additional diagnostic work-up is needed? Select one or more:

a. Head CT/MRI u
b. Somatosensory evoked potentials
c. Thyroid panel – TSH, Free T4
d. Electroencephalography (EEG)
e. Neurocognitive tests

A 41-year-old female suffers from poorly controlled bronchial asthma for 4 years, with frequent episodes of sinusitis and serous otitis. Eosinophilia was found in blood test. The patient was consulted by a neurologist for newly developed „glove-like“ numbness in her hands. Which rheumatic disease do you suspect? Select one:

a. Systemic lupus erythematosus
b. Rheumatoid arthritis
c. Eosinophilic granulomatosis with polyangiitis
d. Polyarteritis nodosa
e. No rheumatic disease can be suspected

Patient was assessed by paramedics at the scene. They reported that patient`s eyes were closed to painful stimuli, he localised with his right arm to painful stimuli and no sounds were heard. How severe is his head trauma? Select one:

a. severe
b. moderate
c. mild

A 47-years-old patient has C viral liver cirrhosis with portal vein hypertension. He started bleeding from the varicose veins of the esophagus. This is the fourth bleeding episode. Three times before the endoscopic sclerotherapy was done. Now after endoscopic haemostasis and sclerotherapy bleeding persists. What kind of treatment would you recommend? (SCQ)

a. Transjugular intrahepatic portal vein system (TIPS)
b. Anastomosis of the portal vena cava inf. (portalocaval anastomosis)
c. Liver transplantation
d. Transsection of the esophagus with a circular sewing device
e. Repeat EGDS with sclerotherapy

This patient has uncontrolled recurrent variceal bleeding from portal hypertension due to cirrhosis. Since endoscopic therapy repeatedly failed and bleeding persists, the next best step is TIPS, which rapidly decompresses portal pressure and controls bleeding.

The patient has been suffering from chronic urticaria for 3 months. He develop wheals daily without angioedema. He takes 1 tab.(10 mg) loratadine. No other complaints. Objectively – there are abundant wheals on the skin up to 1-2 cm in diameter. What treatment option would be correct? Select one:

a. I will prescribe cyclosporine.
b. I will increase the dose of the antihistamine up to 4 tab. per day.
c. I will inject dexamethasone intravenously.
d. I will prescribe biological therapy with omalizumab.
e. I will leave the same treatment.

Operations for femoral hernia: Select one or more:

a. Sapiežko
b. Ruggi
c. Lockwood
d. Lichtenstein
e. Mayo

lock that wood rugged

A person was admitted to the hospital due to gunshot injury. One entry wound was located in the posterior side of the middle third of the right thigh. No exit wound was visible. Radiogram revealed the projectile lodged in the posterior muscles of the thigh. What type of gunshot injury is described? (SCQ)

a. neither of the mentioned types
b. perforating injury
c. puncture
d. penetrating injury
e. surface injury

A 60-year-old white female presents with epigastric pain, nausea and vomiting, heart rate of 50 bpm, and pronounced first-degree AV block on Emergency department cardiac monitor. Blood pressure is 130/80 mmHg. The coronary artery most likely to be involved in this process is the: (SCQ)

a. None of the above
b. Left anterior descending artery
c. Left main coronary artery
d. Right coronary artery
e. Circumflex artery

This patient likely has an inferior myocardial infarction involving the Right coronary artery. Inferior MIs commonly cause bradycardia and AV block because the RCA usually supplies the AV node.

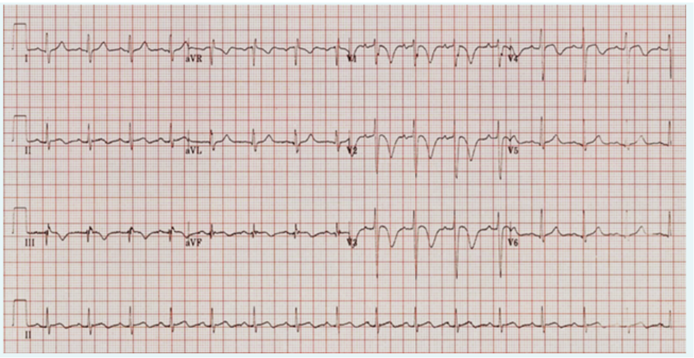
A 75-year-old lady fall down from the stairs. No loss of consciousness, headache. On examination: Glasgow Coma Scale 15, left side of the face is paralyzed, strength of the extremities equal (5/5), hearing loss on the left, no other focal neurological symptoms. What do you expect the CT scan to reveal? (could be two correct answers)

a. Acute subdural hematoma on the right
b. Temporal epidural hematoma on the left.
c. Temporal bone fracture on the left
d. Left mastoid cells filled with fluid
e. Intracerebral contusion of the right occipital lobe of the brain

A 71-year-old female developed sudden chest pain with dyspnoea and subsequent syncope at home. She had history of chronic right leg deep venous thrombosis, arterial hypertension and hip replacement 3 months ago.

- Vital Signs
    - BP: 120/85 mmHg
    - HR: 108 bpm, regular
    - Respiration: 34 per min
    - Oxygen saturation: 86%, room air
- Laboratory
    - D dimers 3740 (normal range <250)
    - BNP 640 (normal range <100)
    - Troponin I 340 (normal range <15)

ECG:



What would be the next most appropriate step in management of this patient?
Select one:

a. CT angiography
b. Transoesophageal echocardiography
c. Myocardial perfusion scintigraphy
d. Exercise ECG stress testing
e. Nothing – diagnosis is already clear

This patient most likely has a massive/submassive Pulmonary embolism: sudden dyspnea, chest pain, syncope, hypoxia, tachycardia, elevated D-dimer, troponin, and DVT history after surgery.

The next step is to confirm the diagnosis with CT pulmonary angiography (CTPA).

A 40 year old woman was admitted to emergency room with generalized tonic-clonic seizures which occurred for the first time in her life. Brain lesions were seen in the computed tomography (CT) of the head. After hospitalization, contrast-enhanced brain MRI showed two enhancing lesions around 2 cm in size. It is known that the patient was treated for diffuse large B cell lymphoma and finished her treatment according to R-CHOP (rituximab, cyclophosphamide, doxorubicin, prednisone, vincristine) regimen 3 months ago with good response to treatment. Laboratory work: WBC 4 x 109/L; NEU 3 x 109/L; LYM 0,7 x 109/L; HGB 118 g/L; PLT 200 x 109/L; CRP 10 mg/L; LDH 200 U/L. Your next step:
Select one:

a. Perform PET/CT
b. Cerebrospinal fluid (CSF) analysis and biopsy of a brain lesion
c. Pallative radiotherapy or gamma-knife targeting the lesions
d. Continue R-CHOP regimen for 8 full cycles or until maximum patient toleration
e. Second line treatment with high-dose methotrexate and rituximab

Patient complains of constant cough with small amount of sputum in the morning. He is smoking for about 20 yrs. Patient's vital signs are normal, spirometry and chest X-ray are normal. Which answer is correct (SCQ)?

a. Patient has lung disease. Chest computed tomography is required.
b. There is insufficient evidence that patient has lung disease. Further investigation is needed.
c. Patient has lung disease. Bronchoscopy is required.
d. The patient has chronic bronchitis.
e. The patient has no lung disease.

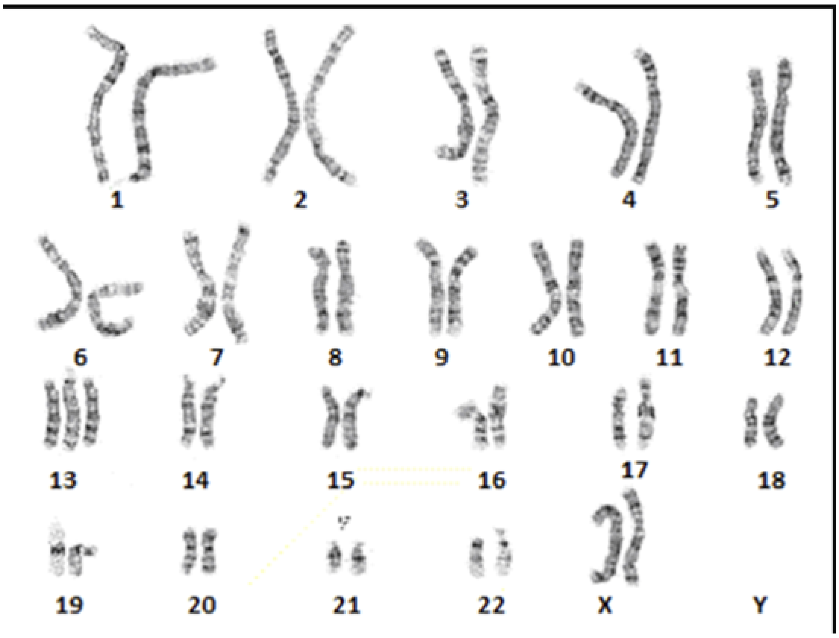
During a flu epidemic, a 52-year-old woman developedfewer up to 38 degrees C, pain in the neck and throat, which increased with swallowing or neck palpation. She also felt weakness, tachycardia with extrasystoles, sweating and hand tremor.. What pathology would you suspect? Select one:

a. Pharyngitis.
b. Otytis.
c. Laryngitis
d. Head neuralgia.
e. Subacute thyroiditis.

The patient has systemic lupus erythematosus since childhood. The disease manifested as arthritis, erythema, periodic subfebrile fever. Patient was treated with hydrochlorochine and prednisolone 5- 7.5 mg / d. Two weeks ago, she noticed that the calves of her legs became swollen, the swelling was progressing, because of that patient came to an unscheduled rheumatologist's appointment. Laboratory tests were performed: the total blood test-normal, increased ESR (50 mm / h), CRP-20 mg / l, protenuria (2.0 g / l protein in urine), creatinine test-normal. What should be the patient's further diagnostic and treatment tactics? Select one:

a. All medications have to be discontinued until the situation is clear
b. Repeat the urine test after 1 month, do not change the treatment now
c. No further testing is required, the patient should be treated with prednisolone 1.5 mg / kg body weight for three months, followed by a repeat urine test for proteinuria
d. Assess the amount of protein in 24hours urine, refer the patient to nephrologist consultation (to perform kidney biopsy), increase the dose of prednisolone until additional tests are performed
e. Diuretics have to be prescribed for the swelling of the calves, no further testing is required

Karyotype was performed, results are provided in the picture. Which set of clinical features is most likely for your patient?



trisomy 13 (three copies of chromosome 13), which causes Patau syndrome.
Patau syndrome is characterized by severe midline developmental defects such as holoprosencephaly, cleft lip/palate, cyclopia, polydactyly, and major cardiac abnormalities.

a. upward slanting palpebral fissures, almond shaped eyes, flat face, large tongue, single transverse palmar crease, intellectual disability, cardiac problems, celiac disease, renal problems, early aging
b. unmotivated episodes of laughter, ataxia, characteristic changes in EEG, severe intellectual disability
c. hypotonia in infancy, hyperphagia with childhood onset, short stature, small hands and feet
d. holoprosencephaly, cyclopia, cleft lip/palate, micro- or anophthalmia, regions of occipital cutaneous aplasia, postaxial polydactyly, cardiac and urogenital malformations
e. microcephaly, hypertelorism, poorly modelled and angular ears, pes equinovarus, the fingers overlap, microphthalmia, coloboma, heart congenital anomalies, esophageal atresia, anorectal malformations

Sara, a 35-year-old, married, childless woman, was referred for treatment following the death of her baby girl in utero at 27 weeks' gestation. Sara's chief complaint was: "I feel like I should be over it." Sara reported she had been feeling sad and irritable most of day, nearly every day, and unable to enjoy things she used to enjoy. She was crying frequently, socially withdrawn, had low energy and difficulty concentrating, experienced decreased appetite, and felt very bad about herself. She denied ever having thoughts of suicide or feeling that life was not worth living. Sara was plagued by inappropriate guilt.
Sara was an attractive woman of average height and weight who looked her stated age. She was casually but neatly dressed in jeans and a large sweater. Sara's movements were slightly slowed; her speech was fluent. Her mood was depressed and her affect, congruent and tearful. She denied current or past suicidal ideation and any history of substance abuse or psychotic symptoms. She denied current or past medical conditions, including thyroid dysfunction.
The doctor should: (Select one)

a. Encourage the patient to stop grieving over the loss and return to work as soon as possible
b. To urge Sara to socialize more and stop thinking about the loss
c. Immediately prescribe antidepressants to improve her mood
d. Refer the patient to a psychotherapist to help her smoothly overcome the bereavement

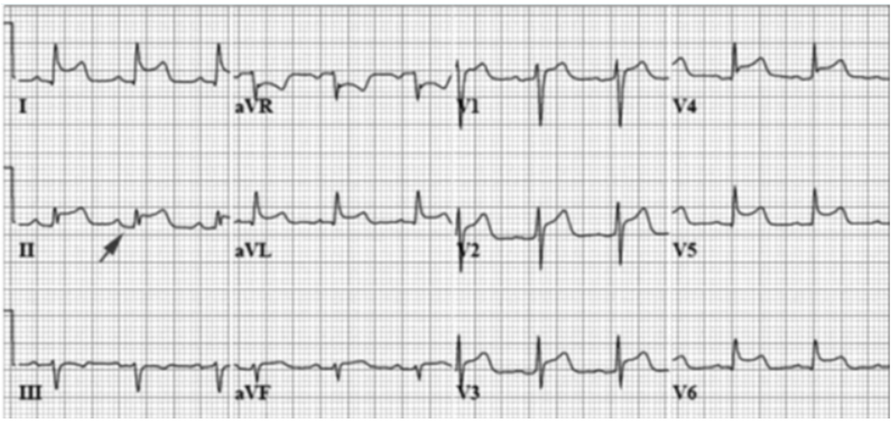
In December 2022, a 56-year-old man came to the Emergency Department. He has arterial hypertension, no other diseases. The patient had febrile fever for 6 days, was coughing, felt shortness of breath. T – 38.6 °C, respiratory rate 22 t/min, SpO2 90 % breathing ambient air, with oxygen at 4 l/min through nasal cannulas - SpO2 95 %. General blood count in normal limits, CRP 74 mg/l, procalcitonin test 0.02 mcg/l. Chest x-ray showed bilateral infiltration. SARS-CoV-2 was detected in a nasopharyngeal smear by PCR. Due to bilateral pneumonia and the need for additional oxygen, the patient was hospitalized. Which treatment will you choose?

Select one:

a. Oral antibiotic
b. Monoclonal antibodies against SARS-CoV-2
c. Intravenous tocilizumab
d. Intravenous remdesivir and dexamethasone
e. Intravenous piperacillin/tazobactam

This patient has hospitalized hypoxic COVID-19 pneumonia requiring supplemental oxygen.
In hospitalized COVID patients needing oxygen, the standard evidence-based treatment is dexamethasone plus remdesivir.

Previously healthy 23 yrs-old male presented with fever up to 38°C and retrosternal pain without irradiation. Pain was aggravated by inspiration and coughing and lessen by siting and leaning forward. ECG is showed below.



What diagnosis is the most likely? Select one:

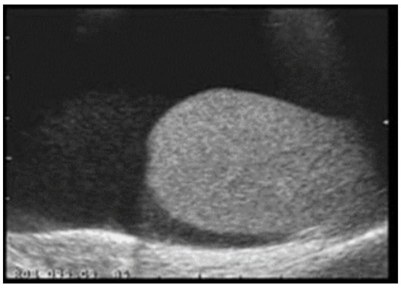
a. Acute appendicitis
b. Acute pneumonia
c. Acute myopericarditis
d. Acute anterolateral-inferior ST elevation myocardial infarction
e. Acute pleuritic

Acute myopericarditis means inflammation of:

the pericardium (the sac around the heart)
and also some inflammation of the heart muscle itself (myocardium)

It is often caused by a viral infection and causes sharp chest pain that changes with body position.

67-year-old diabetic patient noticed enlarged right side of scrotum 1 year ago. Today right side of scrotum enlarged even more. Testicles are not painful and there are no signs of trauma. Sonoscopy: clear fluid around right testicle.



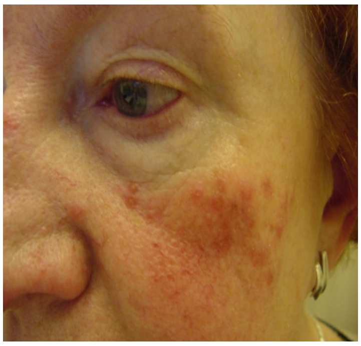
What is right diagnosis? Select one:

a. Acute orchoepidydimitis
b. Hydrocele
c. Testicle carcinoma
d. Lipoma of testis.
e. Inguinal hernia

64 years old heavy smoker presented with hoarseness, short of breath. Hoarseness appeared 6 months ago and from that time intensifies. During laryngoscopy you see hyperkeratosis on the left vocal fold, anterior part. Which of these statements are correct? Select one or more:

a. Most possible diagnosis - laryngeal cancer
b. Laryngeal papilloma is caused by smoking
c. Most possible diagnosis - vocal fold granuloma
d. Laryngeal cancer is classified by sites to supraglottic, glottic and subglottic
e. Risk factors of laryngeal cancer are smoking, alcohol abuse, human papilloma virus, gastroesophageal reflux disease

62-year-old woman with long-standing erythematous papules, plaques on the cheeks and nose. Skin lesions are exacerbated by sun exposure and hot drinks. No response to specialised cosmetic creams for the sensitive skin.



Select one:

a. Folliculitis
b. Discoid lupus erythematosus
c. Erysipelas
d. Papulopustular acne
e. Papulo-pustular rosacea

Intraoperatively the ECG shows bradycardia (47 bp/min) and ventricular premature complexes without extreme hypotension during cholecystectomy in a 62-year-old man who had myocardial infarction and is taking atenolol. The drug of choice for treating this dysrhythmia is:

a. Atropine
b. Verapamil
c. Ephedrine
d. Adrenaline
e. Lidocaine

42 year old patient with alcoholic liver cirrhosis presents to the Emergency department with subfebrile temperature, jaundice, increasing abdomen, family noticing deepening encephalopathy. Laboratory work up shows: neutrophilic leucocytosis WBC 16 x 10*9/l, NEU 83%, total bilirubin 142mcmol/l, with increase in direct bilirubin, coagulopathy PT 29%, CRP 23g/l. Sonoscopy shoes signs of liver cirrhosis and severe ascites. Which statements about following workup and treatment modalities are TRUE?

a. Appropriate management options for ascites are sodium-restricted diet, diuretics and paracentesis
b. Decompensation of liver function most probably is associated with an infection
~~c. Due to progressive decompensation of liver function the patient must be included in the recipient list for liver transplant immediately~~
~~d. To manage encephalopathy and ascites creation of transjugular intrahepatic portosystemic shunt is warranted~~
e. Investigation for infection is warranted: microbiology of urine and blood, cytology of ascites, chest X-ray

33 years old woman came to a rheumatologist consultation, because of a worsened condition. Rheumatoid arthritis was diagnosed 6 months ago, sulphasalazine was prescribed then, Methotrexate - 20mg per week in combination with folic acid was added three months ago. She also is taking prednisolone 7,5mg/day, ibuprofen and occasionally paracetamol. Regardless the treatment patient keeps suffering of pain in hands and feet joints and morning stiffness lasting about 3 hours. Objectively: heart and respiration rates within the normal range. Neck and shoulder joints movements of sufficient range. Subcutaneous nodules are observed in the area of elbows. Right elbow is swollen and has a functional contracture. Wrists and metacarpophalangeal joints are painful bilaterraly and synovitis is observed. Left knee a little swollen. Metatarsophalangeal joints are painful bilaterally. Laboratory tests: HB - 122 g/l; platelets - 460x10*9/L. ECR - 45mm /h. Periarticular osteopenia of hand joints is visible in X-rays. What would be optimal solution for the treatment of this patient?

a. Discontinue Non-steroid anti-inflammatory drug (NSAIDs)
b. Discontinue methotrexate and prescribe sulfasalazine
c. Add cyclophosphamide tablets
d. Elevate the dose of prednisolone
e. Prescribe a biological disease-modifying anti-rheumatic drugs (bDMARD)

A 65-years-old patient with abdominal pain, nausea, vomiting, lack of flatus and bowel movements presented to hospital. The patient does not have any co-morbidities. Symptoms are present for 4 days. Clinical presentation: an enlarged abdomen, hyperactive bowel sounds and digital rectal examination present empty rectum. Abdominal X-ray: presence of large bowel obstruction. Abdominal ultrasound examination: gallbladder stones. After conservative treatment the condition does not improve, so the patient was operated. During the operation, the tumor of the middle third of the sigmoid part of colon was found and due to obstruction above the tumor bowel is full of gas and liquid content. What kind of surgical tactics would you choose? Select one:

a. Sigmoid colon and rectum resection
b. Right hemicolectomy
c. Transverse colostomy and cholecystectomy
d. Sigmoid colon resection with colon decompression during surgery and primary anastomosis
e. Left hemiclectomy with preventive ileostomy

29 years old man presented to the emergency room due to intense pain, tearing, blepharospasm and redness of the right eye. During an accident 1 hour ago tear gas was injected into his right eye. Which diagnosis and treatment strategy is the most likely? Select one:

a. Superficial foreign body. Treatment – removal of the foreign body
b. Chemical burn of the conjunctiva and cornea. Treatment with medication
c. Penetrating trauma. Treatment – surgery
d. Endophthalmitis. Treatment – surgery
e. Thermal burn of the conjunctiva and cornea. Treatment with medication

A 67-year old lady has been treated in Intensive Therapy Unit following acute Myocardial Infarction. 3 days later her condition worsened with increasing shortness of breath. On auscultation, she was noted to have harsh systolic murmur at the apex of the heart. Her cardiac ultrasound revealed Ischemic Ventricular Septal Defect. Which of the following treatment options are relevant? Select one or more:

a. Medical management for this pathology is a first line treatment, no surgery should be offered
b. If possible, surgery should be postponed (up to 2 weeks) until scar forms at the edges of the defect which is crucial for a successful closure intraoperatively
c. Ventricular septal defect is an extremely rare pathology with no repair method available
d. If patient is hemodynamically unstable, urgent patch repair of Ischemic Ventricular Septal Defect should be performed
e. Intra-aortic balloon pump until Ischemic Ventricular Septal Defect resolves (closes)

64-year-old male was consulted because of polyuria, increased BP, irritability, recurrent renal colic. Blood tests were performed: calcium 2,64 mmol/l (2,1-2,6), ionized calcium 1,34 mmol/l (1,0-1,3), parathyroid hormone (PTH) 16,4 pmol/l (1,6-7,3), OH-vit D 70 nmol/l (75-100), eGFG 82 ml/min. What is the most likely diagnosis? Select one:

a. Tertiary hyperparathyroidism
b. Malignancy-related hypercalcemia
c. Secondary hyperparathyroidism due to kidney failure
d. Secondary hyperparathyroidism due to vit D deficiency
e. Primary hyperparathyroidism

64-year-old man was operated because of rectal cancer two years ago – laparoscopic rectal resection was performed for stage III cancer disease. Which of the markers is the best for follow-up: Select one:

a. Pap and HPV testing
b. PSA
c. CEA
d. CA 125
e. Alpha-fetoprotein (AFP)

A 67-year-old man has type 2 diabetes for about 7 years. He is treated with metformin 850 mg TID. Fasting glucose 7-9 mmol/l, 2 hours after a meal 9-11 mmol/l. HbA1C 7.3%.
Diabetes complications diagnosed: symmetric sensory polyneuropathy, diabetic nephropathy.
Comorbidities: primary arterial hypertension, dyslipidemia.
Concomitant medications: valsartan, amlodipine, atorvastatin.
Laboratory tests performed: urine albumin/creatinine ratio 5.2 mg/mmol, eGFR 54 ml/min.
How would you adjust this patient's diabetes treatment to prevent the progression of diabetic nephropathy most effectively? Select one:

a. I would increase the dose of metformin to 1000 mg TID
b. I would add a sulfonylurea
c. I would start insulin therapy
d. I would add a sodium glucose transporter - 2 (SGLT-2) inhibitor
e. I would add a dipeptidyl peptidase-4 (DPP-4) inhibitor

A 70 year old man is referred to you due to anemia. He is complaining of back pain (severity – 8 out of 10) which started a year ago. It is known that the patient has prostate carcinoma (Gleason 6), never treated, and is followed by an oncologist. Complete blood count: HGB 90 g/L, PLT 150 x $10^9$/L, WBC 5 x $10^9$/L, leukogram is normal. L2-4 vertebral compression fractures are seen in a lumbar X-ray. Positive blood reaction in feces. Your differential diagnosis: Select one or more:

a. Metastatic cancer
b. Acute leukemia
c. Multiple myeloma
d. Chronic myeloproliferative disease
e. Age associated changes

Patient underwent thyroidectomy and neck dissection for thyroid carcinoma. The day after the operation, patient feels out of breath, with stridor, voice is unchanged. The wound heals well. Which statements are correct? Select one or more:

a. I suspect thyroid cancer metastases to the lungs
b. I suspect bilateral paralysis of the vocal folds
c. I suspect one-sided paralysis of the vocal fold
d. I will recommend the medialization of the folds
e. I will recommend an urgent tracheostomy

Your patient with acute myeloid leukaemia is undergoing treatment with induction chemotherapy 7+3 (day 13th). He developed fever >38C with chills. On examination: ABP 100/70mmHg, HR 100bpm, respiratory rate 15bpm. Lungs, stomach – without changes. CBC: NEU 0 x10e9/l, PLT 21 x10e9/l, HGB 82 g/l. What is the most appropriate next step: Select one:

a. Diagnosis of febrile neutropenia: blood and urine cultures, empirical antibacterial therapy using piperacillin/tazobactam and amikacin, administer antipyretics
b. The patient has septic shock and needs urgent transfer to ICU
c. Urgent red blood cell and thrombocyte transfusion
d. Diagnosis of febrile neutropenia: blood and urine cultures, empirical antibacterial therapy using amoxicillin/clavulanic acid
e. Blood and urine cultures, administer antibiotics after the culture results, administer antipyretics

A 72-year-old male has the following findings: Hgb 104 g/L (reference value 128-160 g/L), Hct 30.3% (reference value 40,0-48,0%), MCV 72 fL (reference value 78-96 fL), platelet count 239,000/microliter (reference value 140,000 – 450,000/µL), and WBC count 7,500/microliter (reference value 4,000-9,800/µL), with 70.1% grans (reference value 40-65%), 18.8% lymphs (reference value 25-37%), and 11.1% monos (reference value 2-10%). The total bilirubin is not elevated. RBCs in the peripheral blood smear would most likely show: Select one:

a. Microcytosis and hypochromasis
b. Howell-Jolly bodies
c. Fragmentation
d. Many nucleated forms
e. Spherocytosis

This is microcytic anemia, most likely iron deficiency anemia in an older man until proven otherwise.
Low Hgb/Hct + low MCV means the RBCs are small and pale → microcytosis and hypochromasia.

59 years old man suddenly got blind 1 hour ago. No ocular pain. He denies systemic diseases, previous ocular surgery or trauma.

**Status ophthalmicus:**

- Best corrected visual acuity:
    - Oculus dexter = 1.0
    - Oculus sinister = light perception
- Intraocular pressure:
    - Oculus dexter = 16 mmHg
    - Oculus sinister = 14mmHg
- Slit lamp examination:
    - Oculi utriusque (OU): without visible inflammation, cornea clear, left relative afferent pupillary defect (RAPD).
- Ocular fundus: oculus dexter - unremarkable, oculus sinister – retina is pale, swollen, red spot in the center of the macula. Arteries are very narrow.

Which diagnosis is the most likely?

a. Exudative age-related macular degeneration
b. Retinal detachment
c. Retrobulbar neuritis
d. Central retinal vein occlusion
e. Central retinal artery occlusion

Male patient, 75 years old, has weak urinary stream on urination. Sometimes he experience sudden stops of urination. After change of body position, urination became possible again. DRE investigation: enlarged size, not painful, elastic surface. PAS test- 2,9 ng/ml What disease do you suspect? Select one:

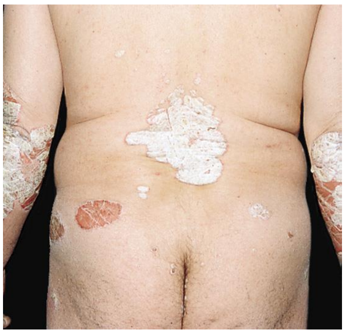
a. Stricture of urethra
b. Hyperactive bladder syndrome
c. Prostate cancer
d. Benign prostatic hyperplasia with bladder stone.
e. Urinary bladder cancer

A 65-year-old female has type 2 diabetes for 5 years. Body mass index is 28 kg/m2. She has diabetic retinopathy. Serum creatinine is 60 µmol/l (GFR 92 ml/min/1,73m2). Which test you should do in order to evaluate for possible diabetic nephropathy? Select one:

a. Albumin to creatinine ratio in spot urine
b. No additional tests are necessary because serum creatinine is normal
c. Serum cystatin C
d. Urine dipstick test

55-year old male referred to dermatology department complaining about the plaques on the elbows, back, covered with silvery scale. Also he has joint pain and nail changes. What would be the diagnosis?
Select one:

a. Tinea corporis
b. Parapsoriasis
c. Crusted scabies
d. Mycosis fungoides
e. Psoriasis



A 32-year-old patient visited a general practitioner complaining of blurred vision in the right eye. Anamnesis: the vision decreased gradually and painlessly 4 days ago. Before that the patient felt flashes of light and sparks in the right eye, suddenly lots of floaters appeared, followed by a curtain that covered temporal part of a visual field and was gradually increasing in size. The patient is nearsighted since childhood. 1 year ago experienced blunt trauma of the left eye with a tennis ball.
On examination:

- V RE = 0.02 (not correctable), V LE = 0.08 sph (–)5.0D = 1.0;
- Tn RE =8 mmHg, Tn LE = 14 mmHg;
- Both eyes quite, corneas clear, pupils regular, normally reactive to light. Fundus view is impossible due to lack of equipment.

Outline your diagnosis and plan for workup for family doctor.
Select one:

a. Central retinal artery occlusion in the right eye. Ocular massage, urgent referral letter to ophthalmologist.
b. Primary open angle glaucoma in the right eye. Urgent referral letter to ophthalmologist
c. Retinal detachment in the right eye. Urgent referral letter to ophthalmologist.
d. Traumatic cataract in the right eye. Routine referral letter to ophthalmologist
e. Branch retinal vein occlusion in the right eye . Urgent referral letter from family doctor to ophthalmologist and cardiologist.

The labour induction was performed for 35 year-old woman. Her first delivery was caesarean delivery due to breech presentation. This pregnancy uncomplicated. Before labour induction – the fetal lie – longitudinal, vertex presentation, cervical dilatation 4 cm, NST – reactive, amniotic fluid index normal, estimated fetal weight 3500 g. The amniotomy was performed. After amniotomy, the bleeding (150 ml of blood) started, CTG showed bradycardia, maternal pulse 80 bpm, BP 120/70 mmHg. Which possible sources of bleeding and fetal distress in this clinical situation?

Select one:

a. Ruptured vasa praevia
b. Placenta
c. Bloody show
d. Placenta praevia
e. Total uterine rupture

In Vasa previa:

fetal vessels run through membranes over the cervix
unprotected by placenta or Wharton jelly

When membranes rupture:

fetal vessels tear
fetus rapidly hemorrhages

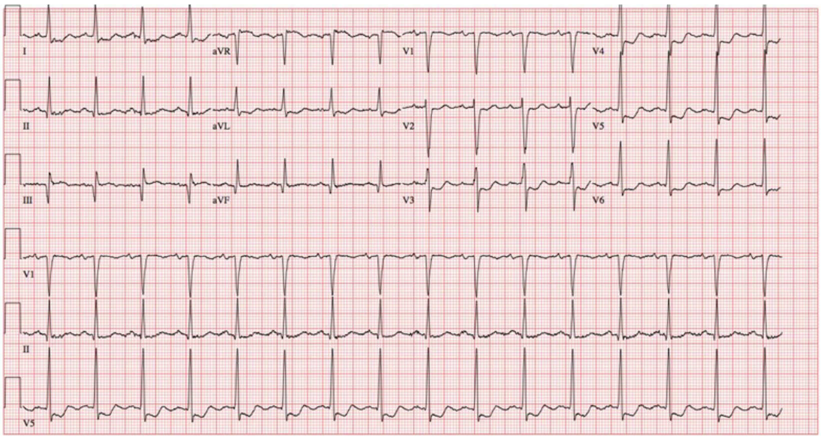
The following features may be present in a patient presenting with septic shock: Select one or more:

a. Hypotension
b. Hypertension
c. Oliguria
d. Confusion

69-year- old male is complaining of frequent episodes of irregular heartbeat, shortness of breath during physical activity, weakness. He was treated for paroxysmal atrial fibrillation for 5 years, he is currently taking oral amiodarone 200 mg OD. Lab. tests: TSH-0,03 mU/l (0,4-4), FT4 24,5 pmol/l (9,0-19,0). Palpation: thyroid not enlarged, without palpable nodules. What is the most likely diagnosis? Select one:

a. Amiodarone-induced hypothyroidism → *can lead to hypo- or hyperfunction*
b. Graves' disease
c. Subacute thyroiditis
d. Multinodular toxic goiter
e. Amiodarone-induced hyperthyroidism → TSH ↓ and FT4 ↑= Hyperthyroidism (Anja)

71-year-old male patient presented to emergency department with severe chest pain and dyspnea. Onset of pain 2-3 hours ago. History of smoking, hyperlipidemia, hypertension, previous PCI on RCA due to chonic coronary syndrome. On physical examination patient is pale, sweaty, BP 85/60 mmHg. HR 94 bpm, signs of pulmonary congestion.



What would be an appropriate strategy for coronary artery evaluation? Select one:

a. Immediate invasive (coronary angiography < 2 h)
b. Coronary CT angiography to rule out significant coronary artery stenosis
c. Invasive coronary angiography any time during the in-hospital admission
d. No need for coronary artery evaluation – medical therapy
e. Early invasive (coronary angiography <24 h)

A 35-year-old female with ulcerative colitis started treatment with mesalazine. In 3 months she developed fever, fatigue and was consulted by the family doctor. Blood test showed eosinophilia. Her creatinine level was 315 µmol/l and in a couple of days reached 640 µmol/l. Urine test: several leukocytes, erythrocytes and mild proteinuria. Urine culture: E.coli 102 CFU/ml. What is your diagnosis? Select one:

a. IgA nephropathy
b. Autoimmune interstitial nephritis
c. Acute pyelonephritis
d. Interstitial nephritis associated with vasculitis
e. Severe mesalazine induced interstitial nephritis

The patient after polytrauma and bleeding from wounds was resuscitated by infusion therapy. Hypovolemia was achieved with crystalloids infusion. On the second day after admission the patient is mechanically ventilated due to severe acute respiratory distress syndrome. What haemoglobin level in blood is a trigger for red blood cells transfusion recommended in international guidelines? Select one:

a. Haemoglobin < 120 g/l.
b. Haemoglobin ≤ 80 g/l.
c. Haemoglobin 60-70 g/l.
d. Haemoglobin < 100 g/l.
e. Haemoglobin < 90 g/l.

20 years old male noticed changes in the right testicle. Testicle slightly enlarged, not tender, little bit more hard on palpation. No fever. Sonoscopy of kidneys, bladder and prostate - no changes. In the right testicle diagnoses hypoechogenic, 3 cm size structure, with good vascularisation. Urinalysis normal. Chest x-ray normal. What is right diagnosis? Select one:

a. Orchoepidydimitis
b. Testicular tumor
c. Hydrocele
d. Infarction of testis
e. Inguinal hernia

A 63-year-old man presents with a 3 hours lasting chest pain due to a ST-elevation anterolateral acute MI. His troponin on admission is elevated at 12000 ng/l. The ECG is consistent with an acute anterolateral ST-segment elevation myocardial infarction (STEMI). He has a past medical history of familial hypercholesterolemia but is taking no medication. His total cholesterol level is 11.3 mmol/l. Patient is hemodynamically stable. He undergoes coronary angiography which reveals triple-vessel disease with an acute occlusion of left anterior descending (LAD) coronary artery. Which one of the following statements regarding his treatment is correct? Select one:

a. Urgent Coronary artery bypass grafting (CABG) is indicated
b. Primary stenting is not indicated because of triple-vessel disease.
c. Primary stenting of LAD (culprit lesion) is indicated
d. Stress echocardiography is indicated
e. Viability testing is indicated

38-year-old male reports about being constantly haunted by Martians, meeting and communicating with his deceased mother who has passed away 5 years ago. According to relatives his problems started 3 years ago when he developed unstable mood, became irritable, distrustful, forgetful. He is unemployed for 1 year, does not take any medications, gradually develops increasing number of involuntary jerks in face, limbs and trunk which impair his daily activities. Patient‘s mother was reported to have involuntary movements, impairment of orientation and memory, died at the age of 52. Neurological examination: conscious, obeys the commands but is incapable of full performance, restless, meaningless gesticulation, protrudes the tongue but can‘t keep it stable; decreased muscle tone; no abnormalities of sensation, strength and deep tendon reflexes, Mini-mental state examination score is 24. Which examination would confirm the diagnosis? Select one:

a. HTT gene analysis.
b. Brain MRI.
c. Cerebrospinal fluid analysis.
d. Testing for pathogenic variants of ATP7B gene.
e. Electroneuromyography.

This patient has classic Huntington disease: psychiatric symptoms + cognitive decline + choreiform movements + strong family history. The diagnosis is confirmed by detecting the abnormal CAG repeat expansion in the HTT gene.

What is the symptom?
The patient was brought to the admission department after the accident. An ambulance doctor said the patient was injured in a car on the street. He was briefly unconscious. At the reception, the patient told the doctor that he had gone from work, was in a great hurry to go home, but did not remember how the accident happened. He also does not remember how the ambulance arrived and to which hospital he was transported. The patient is conscious during the conversation, answers the questions meaningfully. After explaining to which hospital he was taken, he understands where such a hospital is. He asks to inform relatives.

a. Palimpsest
b. Acute stress reaction
c. Fixation amnesia
d. Delirium
e. Retroanterograde amnesia

38-year-old male reports about being constantly haunted by Martians, meeting and communicating with his deceased mother who has passed away 5 years ago. According to relatives his problems started 3 years ago when he developed unstable mood, became irritable, distrustful, forgetful. He is unemployed for 1 year, does not take any medications, gradually develops increasing number of involuntary jerks in face, limbs and trunk which impair his daily activities. Patient‘s mother was reported to have involuntary movements, impairment of orientation and memory, died at the age of 52. Neurological examination: conscious, obeys the commands but is incapable of full performance, restless, meaningless gesticulation, protrudes the tongue but can‘t keep it stable; decreased muscle tone; no abnormalities of sensation, strength and deep tendon reflexes. Mini-mental state examination score is 24. What clinical diagnosis is the most probable? Select one:

a. Huntington‘s disease.
b. Creutzfeldt-Jakob disease.
c. Amyotrophic lateral sclerosis.
d. Tourette syndrome.
e. Wilson‘s disease.

60 years old female presented with acute onset of severe pain and redness in her right eye and blurred vision. Symptoms occurred in the evening after watching television in the darkened room. No previous trauma.

Status ophthalmicus:
Best corrected visual acuity
Oculus dexter = 0.3
Oculus sinister = 1.0

This is classic Acute angle-closure glaucoma: sudden painful red eye, blurry vision, hard eye, mid-dilated fixed pupil, and symptoms triggered in the dark.

Darkness causes pupillary dilation, which can suddenly block aqueous humor drainage and sharply raise intraocular pressure!!!!

Slit lamp examination:
Oculus dexter: conjunctival injection, mild corneal oedema, shallow anterior chamber, no cells or flare, dilated nonreactive pupil. Stiff eye while palpating.
Oculus sinister: unremarkable. Which diagnosis is the most likely?

a. Retinal break and detachment
b. Acute angle closure glaucoma
c. Acute conjunctivitis
d. Acute uveitis
e. Bacterial keratitis

18 m. female presented with history of tearing, redness and foreign body sensation in both eyes. Medical history: Upper respiratory symptoms 1 week ago, lymphadenopathy.
Status ophthalmicus:

Best corrected visual acuity
Oculus dexter = 0.9
Oculus sinister = 1.0
Intraocular pressure:
Oculus dexter = 14 mmHg
Oculus sinister = 15 mmHg

This is classic Viral conjunctivitis: bilateral red watery eyes after a recent URI with follicular conjunctival reaction and lymphadenopathy.
The biggest clues are URI + watery tearing + follicles + preauricular lymphadenopathy.

Slit lamp examination:
Oculi utriusque (OU): oedema of eyelids, epiphora, mucous discharge seen in the conjunctival fornix, conjunctival injection and follicular reaction, clear cornea, no fluorescein staining, deep anterior chamber, no flare, reactive pupil. Ophthalmoscopy: unremarkable. Which diagnosis is the most likely? (Select one)

a. Viral keratitis
b. Acute iridocyclitis
c. Acute dacryocystitis
d. Viral conjunctivitis
e. Bacterial conjunctivitis

A 76-years old man who was ill with liver cirrhosis about 15 years was admitted to hospital with decompensated stage of this disease. Please indicate the signs and symptoms TYPICAL for severe hepatic failure due to last stage of liver cirrhosis. Select one or more:

a. Hepatomegaly
b. Jaundice
c. Hepatorenal syndrome with renal failure
d. Hepatic encephalopathy, Grade 4
e. Damage of coagulopathy

A two-year-old girl was brought to the Emergency Care Department because of the stridor heard even at rest. The child is agitated, normal body temperature, respiratory rate 35 bpm, SpO2 94%, rhinitis, pharynx pink, prolonged inhalation is heard in the lungs on auscultation, no rales. What treatment would you prescribe first? Select one:

a. Oxygen throuh the mask 2 l/min
b. Salbutamol inhalation 200 mcg 3 tpd
c. Dexamethazone IM 0.5 mg/kg once
d. Epinephrine inhalation 0.5 mg/kg once
e. Prednizalone orally 1 mg/kg in 24 hours

A patient suffering from allergic rhinitis since the age of 11, who has a very high level of specific IgE antibodies to birch, alder and hazel trees detected in her blood serum, since the age of 13 complains of itching and burning of the lips, tongue, palate, and pharynx when she eats raw apples or carrots, these symptoms last about 10-15 minutes.  Patient does not react to cooked forms of these foods. What is the patient's diagnosis? Select one:

a. Stomatitis
b. Eosinophilic esophagitis
c. Immediate gastrointestinal hypersensitivity
d. Gastroesophageal reflux disease
e. Oral allergy syndrome

55-year-old male complains of trembling of the right hand, changes in hand-writing and decreased sense of smell for about 6 months. No concomitant medications. Neurological examination: rest tremor of the right arm, decreased synkinesis in the right during gait, muscle tone is higher in the right extremities and increases during passive repetitive movements. Sensation and muscle strength are normal. Mini-mental state examination score - 30. Brain magnetic resonance imaging is normal. What is the most probable diagnosis? Select one:

a. Multiple sclerosis.
b. Wilson‘s disease.
c. Parkinson‘s disease.
d. Dopa-responsive dystonia.
e. Essential tremor.

55-year-old male complains of trembling of the right hand, changes in hand-writing and decreased sense of smell for about 6 months. No concomitant medications. Neurological examination: rest tremor of the right arm, decreased synkinesis in the right during gait, muscle tone is higher in the right extremities and increases during passive repetitive movements. Sensation and muscle strength are normal. Mini-mental state examination score - 30. Brain magnetic resonance imaging is normal. Which medical treatment strategy is the most appropriate?
Select one:

a. Dopamine agonists
b. Interferon beta-1b.
c. Levodopa monotherapy.
d. Propranolol.
e. D-penicillamine.

A 50-year-old man was admitted to the Emergency Department with a three days’ history of fever, headache, nausea and vomiting. On physical examination he had neck stiffness and positive Kernig sign. Pathologic reflexes were negative. Lumbar puncture was performed. The CSF cell count was 5,000 x $10^6$/l (neutrophils 90%, lymphocytes 10%), protein level 3.0 g/l, glucose level 1.1 g/l, no fibrin web. What is your diagnosis? Select one:

a. Neuroborreliosis
b. Tuberculous meningitis
c. Bacterial meningitis
d. Viral meningitis
e. Tick-borne encephalitis

This is classic Bacterial meningitis: fever, headache, neck stiffness, and CSF showing very high neutrophils, high protein, and low glucose.
The CSF profile is the key — bacterial meningitis causes a neutrophilic, low-glucose meningitis.

65-year-old female presents with itching and lesions on almost all her body. She complains that the itching lasts for about 1 month, more at night or after lying in the bed. She tried oral antihistamines - without effect. Objective findings include erythematous paired papules and scabs on the skin of the torso, arms, interphalangeal areas, groin, legs and feet. It is known from the medical history that the patient was hospitalized for pneumonia 1.5 months ago. What skin disease does this patient have? Select one:

a. Nummular *dermatitis*
b. Scabies
c. Contact dermatitis
d. Folliculitis
e. During's dermatitis

36 y.o. women in pregnancy of 5 weeks is consulted at the emergency department due to right iliac region abdominal pain, lasting for 24h. The pain started at first at the umbilical region and afterwards irradiated to the right iliac area. She has no other complains and it is the first similar pain episode in her lifetime. It is her very first pregnancy; she denies any concomitant diseases, any surgery in the past or allergies. When palpating, abdomen is painful in the right iliac area without signs of peritoneal irritation. She has been just now consulted by obstetrician – gynecologist performing transvaginal sonography and it was concluded an uterine pregnancy without any obstetrical – gynecological pathology. Laboratory assay findings: leukocytosis 12,8x109/l; C reactive protein 54 mg/l; serum electrolytes and creatinine normal; in urine test – minimal amount of protein and nitrites. Which one out of suggested assays would you choose as a first option for further differential diagnostics of this patient? Select one:

a. Abdominal and pelvic CT scan
b. Abdominal and pelvic transabdominal sonography
c. Diagnostic laparoscopy
d. Abdominal and pelvic MRI
e. Abdominal X-ray

12-year old boy was diagnosed with immunoglobulin A nephropathy.
Blood pressure at 90th percentile by age, gender and height. Laboratory findings: eGFR 98 ml/min/1.73 m2, automated urinalysis shows microhematuria and proteinuria (1,0 g/L), 24-hour urine protein excretion 1,25 g/L.
What is the indicated treatment? Select one:

a. No treatment is indicated
b. Angiotensin converting enzyme inhibitors
c. Calcineurin inhibitors
d. Beta-blockers
e. Metylprednisonolone pulstherapy

This child has IgA nephropathy with persistent proteinuria but preserved kidney function.
The first-line treatment is an ACE inhibitor, because it reduces intraglomerular pressure and proteinuria, protecting the kidneys long-term.

A 62 years old man felt a pain to his inferior teeth 5 days ago. After 2 days his right cheek, right submandibular area, and the right side of the neck have started to swell. He also got a febrile fever. Today dyspnea and dysphagia had begun, and the patient was transferred to the hospital by an ambulance. On admission: painful and significantly swollen right side of the face and neck. T-38.6°C. Respiratory rate 28/min, blood pressure 130/70 mmHg, pulse rate 100/min. Breathing sounds are diminished in the inferior part of the right chest. What examinations and / or consultations would you order at first? Select one:

a. Chest X-ray, ultrasound of the neck and pleural cavity, CT scan of the head, neck and chest, and urgent consultation of thoracic surgeon
b. Chest X-ray, fibrobronchoscopy and urgent consultation of pulmonologist
c. General blood test and urgent consultation of odontologist
d. Esophagogastroduodenoscopy and urgent consultation of intensive care specialist

e. Barium swallow test of esophagus and consultation of gastroenterologist

A 35-year-old woman presents with a three-day history of cough productive of small amounts of phlegm. What one accurate sign should make you suspect this is pneumonia rather than a bronchitis? Select one:

a. Viral infection previously
b. A pyrexia
c. Purulent flegm
d. Coarse crepitation locally
e. A pulse rate of 96/min

"Coarse crepitation locally"
means:
localized crackles in one lung area

This strongly suggests:
alveolar involvement/consolidation
which is characteristic of:
Pneumonia

A 22-year-old patient is admitted to a family doctor, because after returning from a trip to the mountains, she has noticed swelling of several hand joints, a right knee joint, and a rash on the face, neck, and chest area. Her legs became swollen. In the last days she felt great general weakness and had subfebrile fever. In the anamnesis - bacterial infections are denied, there are no signs of acute viral infection. Mild leukopenia, anemia, increased erythrocyte sedimentation rate (50 mm / h), CRP-15 mg / l, and proteinuria in the urine test (1.0 gram per liter of protein in the urine test) were observed. What pathology would you suspect? Select one:

a. Wegener's granulomatosis
b. Rheumatoid arthjritis
c. Urinary tract infection
d. Systemic lupus erythematosus
e. Ankylosing spondylitis

The combination of photosensitive rash + joint symptoms + kidney involvement is the key lupus pattern.

During a one week of inpatient treatment due to pneumonia, patient developed a skin rash – wheals with pruritus. What action will you take? Select one:

a. I suspect an allergic reaction to drugs, most likely antibiotics, discontinue them, prescribe another group of antibiotics if needed for further treatment. I'll prescribe antihistamines for hives.
b. I suspect an allergic reaction to the medication and discontinue the treatment.
c. I will prescribe antihistamines and glucocorticoids
d. I will continue my treatment and prescribe antihistamines
e. I suspect an allergic reaction to antibiotics and replace them with another group of antibiotics.

A patient was admitted to the intensive care unit with a diagnosis of complete cervical spinal cord injury. Due to the presence of acute respiratory dysfunction he is receiving oxygen therapy 2 litres/min. Arterial blood analysis: pH = 7.26, $PaO_2$ = 80 mm Hg, $PaCO_2$ = 70 mm Hg. What therapy strategy should be implemented to improve respiratory function? Select one:

a. Oxygen therapy 6 litres/min through face mask.
b. Tracheal intubation and ventilation with pressure control mandatory ventilation (P-CMV).
c. Oxygen therapy 6 litres/min through endotracheal tube.
d. Non-invasive ventilation with continuous positive airway pressure (CPAP) mode.
e. Oxygen therapy 12 litres/min through face mask.

What is the most appropriate drug to be prescribed for stroke prevention? Select one:

a. Clopidogrel
b. Apixaban
~~c. Aspirin~~
d. Tranexamic acid
e. Alteplase

A 60-year-old male complains of coughing, dyspnea during physical activity. He smoked for 30 years 20 cigarettes per day, he quit smoking 5 years ago. His condition started to deteriorate 2 years ago. His tolerance of physical activity is decreasing. He started to use salbutamol independently, after the inhalation he feels a short relief. Physical examination: respiratory rate 16 times per minute. On auscultation no rales, diminished breath sounds on both lungs. No other findings. Spirometry results (patient inhaled salbutamol 1 hour before the test): FVC 63%; FEV1 36%; FEV1/FVC 43% (patient's lower limit of normal value – 62%). What are your next steps? Which answer is correct?
Select one:

a. There is not enough data for making a diagnosis. Additional investigation is needed – I will perform a chest computer tomography and bronchoscopy. I will recommend to use salbutamol as needed. Reevaluation after the tests.
b. I will diagnose chronic bronchitis and bronchial obstructive syndrome (as a complication of chronic bronchitis). I will recommend to use salbutamol as needed. Additionally I will prescribe amoxicillin 1 g 3 times per day for 5 days.
c. There is not enough data for making a diagnosis. Additional investigation is needed – I will perform a chest computer tomography and heart ultrasound. I will recommend to use salbutamol as needed. Reevaluation after the tests.
d. I will diagnose bronchial asthma. I will prescribe low dose of inhaled corticosteroid and salbutamol as needed. I will schedule the next visit in 1 month.
e. I will diagnose chronic obstructive pulmonary disease. I will prescribe a combination of a long-acting anticholinergic (antimuscarinic) and a long acting beta 2 agonist (in one inhaler). I recommend taking salbutamol further if necessary. I will schedule the next visit in 3 months.

A 62-year-old man complains of shortness of breath during high physical activity. He has been smoking for the last 45 years, 20 cigarettes a day. Has no other chronic diseases (cardiac, systemic connective tissue disease). Working conditions have no harm on the respiratory system. Physical examination: respiratory rate 16 times per minute. Normal breath sounds on auscultation. Finger clubbing is observed. Due to a high risk of lung cancer, a physician refers the patient for a chest CT scan. CT images show small cysts (in separate areas of both lungs), forming groups, arranged in several rows (honeycombing). Pulmonary function test: FVC 103%, FEV1 85%, FEV1 / FVC 65% (patients' lower limit of normal – 62%), TLC 92%, RV 70%, DLCO 52%. What are your next steps? Which answer is correct?
Select one:

a. I suspect lung sarcoidosis. I will perform fibrobronchoscopy with bronchoalveolar lavage (BAL). I will send the BAL fluid for immunological, cytological tests and cultures.
b. I diagnose lung emphysema. I prescribe a combination of a long-acting anticholinergic (antimuscarinic) and a long-acting beta 2 agonist (in one inhaler). I recommend taking salbutamol as needed. I will schedule a control appointment in 3 months.
c. I suspect coronary heart disease. I recommend performing an electrocardiogram, an echocardiography and a cardiac magnetic resonance imaging with contrast.
d. I diagnose chronic obstructive pulmonary disease. I prescribe a combination of a long-acting anticholinergic (antimuscarinic) and a long-acting beta 2 agonist (in one inhaler). I recommend taking salbutamol as needed. I will schedule a control appointment in 3 months.
e. I suspect idiopathic pulmonary fibrosis. I appoint a bronchoscopy with lung cryobiopsy

A 40-year-old female complains of episodic cough and shortness of breath. There is no signs of wheezing or any other abnormal breathing sounds during the cough attack. She herself started using salbutamol. However there has been no significant change. Her condition worsened 2 weeks ago, with no clear reason. There were similar symptoms in the past, but they were not severe. She is a never smoker. Physical examination: respiratory rate 16 times per minute. On auscultation you can hear wheezing. Spirometry results: FVC 102% (after salbutamol inhalation – 108%), change 6%; FEV1 53% (78%), change 24%; FEV1/FVC 53% (62%), patient's lower limit of normal value – 69%. What are your next steps? Which answer is correct? Select one:

a. There is not enough data for making a diagnosis. Additional investigation is needed – I will perform a chest computer tomography and bronchoscopy. I will recommend to use salbutamol as needed. Reevaluation after the chest CT scan and bronchoscopy.
b. I will diagnose bronchial asthma. I will prescribe low dose of inhaled corticosteroid and salbutamol as needed. I will schedule the next visit in 1 month.
c. I will diagnose chronic obstructive pulmonary disease. I will prescribe a combination of a long-acting anticholinergic (antimuscarinic) and a long acting beta 2 agonist (in one inhaler). I recommend taking salbutamol further if necessary. I will schedule the next visit in 3 months.
d. There is not enough data for making a diagnosis. Additional investigation is needed – I will perform a chest computer tomography (CT). I will recommend to use salbutamol as needed. Reevaluation after the chest CT scanning.
e. I will diagnose chronic bronchitis and bronchial obstructive syndrome (as a complication of chronic bronchitis). I will recommend to use salbutamol as needed. Additionally I will prescribe amoxicillin 1 g 3 times per day for 5 days.

An 80-year-old woman is admitted with acute pulmonary oedema on a background of progressive shortness of breath with exertional chest pain for 6 months. She has a history of renal impairment with a eGFR of 40 ml/min. She is initially commenced on IV furosemide with good effect. An echocardiogram reveals LVEF 40% with severe aortic stenosis (AS) with an estimated valve area of 0.7 cm2. She is on sinus rhythm, 90 bpm. What would you do next? Select one:

a. Add a beta-blocker→ False (Vici)
b. Add a beta-blocker and perform angiography with a view to aortic valve replacement (AVR)/transcatheter aortic valve implantation → FALSE
c. Perform angiography with a view to aortic valve replacement (AVR)/transcatheter aortic valve implantation → FALSE
d. Implant a dual chamber pacemaker with defibrillator (why? → sinus rhythm) Jan
e. Add a digoxin (bei vorhofflimmern + HI) Jan

Patient complains of dyspnea, lack of air, dry couhg, sometines with small amount of mucous sputum. Wheezes in both sides of the lungs during auscultation. Pathology found in tests: O2 partial pressure = 66,9 mmHg, hemoglobin oxygen saturation = 93,5 %, blood lactates = 3,2 mmol/L; spirometry data are FEV1/FVC = 56 % (normal range 63.5-82.5), FEV1 = 2,11 liter (normal range 2.5-3.88 l) and 66 %. Which answers are suitable for the differential diagnosis of this pathology? Select one or more:

a. Chronic obstructive pulmonary disease
b. Pulmonary bleeding
c. Dry pleuritis (*pleuritis sicca*)
d. Pneumonia
e. Bronchial asthma

A patient after traffic accident was admitted to the emergency department. He is mechanically ventilated through endotracheal tube. Breathing is not found on right side with chest auscultation, but subcutaneous emphysema was found. Arterial hypotension 50/30 mm Hg, heart rate 150 beats/min, atrial fibrillation. What therapeutic intervention is needed to correct vital functions? Select one:

a. Arterial blood analysis, correction of endotracheal tube placement.
b. Synchronized cardioversion.
c. Epinephrine infusion IV.
d. Amiodarone 300 mg IV.
e. Chest tube insertion after tension pneumothorax confirmation.

A 43-year-old male was admitted to the hospital due to anemia (HgB 88 g/l), elevated serum creatinine (457 µmol/l, while 2 months ago it was 64 µmol/l ), macrohematuria, fever (CRP 10 g/l), bilateral pulmonary infiltration. Which diagnosis is the least likely? Select one:

a. Granulomatosis with polyangiitis
b. Focal segmental glomeruloclerosis
c. Microscopic polyangiitis
d. Anti-glomerular basement membrane antibody disease

Focal segmental glomerulosclerosis mainly affects only the kidneys and does not cause lung infiltrates or systemic vasculitis.

An active 78-year-old female has been followed for hypertension but presents with new onset of mild left hemiparesis and the finding of atrial fibrillation on ECG, which persists throughout the hospital stay. She had been in sinus rhythm 6 months earlier. Optimal treatment by the time of hospital discharge includes antihypertensive medications plus one of the following: Select one:

a. Aspirin
b. Close observation
c. Warfarin or non-vitamin K oral anticoagulants (NOACs)
d. Permanent pacemaker
e. Subcutaneous heparin

You are called to see a 68-year-old male on high dependency unit (HDU) who underwent a gastrectomy with lymph node dissection 2 days ago. He feels generally unwell but has no specific complaints. On reviewing his observation, he has a temperature of 38.2ºC, a HR of 95 bpm, BP is 110/75 mmHg and a RR of 22. His bloods are all within normal limits. On examination his wound appears clean and dry, his chest is clear, and his abdomen is soft. His urine is normal in the catheter. Choose the single most likely diagnosis: Select one:

a. Pulmonary embolism
b. Systemic inflammatory response syndrome (SIRS)
c. Acute respiratory distress syndrome (ARDS)
d. Wound infection
e. Peritonitis

A 28-year-old woman complaining of dry cough, pain in the sternum area (while coughing). The cough appears during the day, the patient sleeps well at night. 3 weeks ago there were signs of acute viral respiratory infection (runny nose, throat pain, short-term fever). Physical examination: respiratory rate 16 times per minute. Normal breath sounds on auscultation. No changes in other organ systems. What are your next steps? Which answer is correct?
Select one:

a. I diagnose acute bronchitis. I recommend to use more warm fluids. Additionally I prescribe amoxicillin 500 mg 3 times daily for 5 days.
b. I diagnose acute bronchitis. I recommend to use more warm fluids. Additionally I prescribe clarithromycin 500 mg 2 times a day for 7 days.
c. I diagnose acute bronchitis. I recommend to use more warm fluids. If coughing is particularly troublesome for a few days I recommend a cough suppressant (libexin, a combination drug with codeine or another similar drug).

d. I diagnose acute bronchitis. I recommend to use more warm fluids. Additionally I prescribe “cough medication” (ambroxol, acetylcysteine, bromhexine or another similar drug).
e. I diagnose acute bronchitis. I recommend to use more warm fluids. Additionally I prescribe azithromycin 500 mg once per day for 3 days.

A peripheral nodule in the right upper lobe (18 mm in diameter, with no involvement of visceral pleura) was found on the CT scan in a 53-year-old man, who was previously healthy, has no complaints and has a normal pulmonary function. Transthoracic needle aspiration biopsy was performed. Histologically adenocarcinoma with EGFR gene mutation was verified. Chest CT scan showed no lymph node enlargement. PET/CT scan of the body showed neither lymph node nor distant metastasis, and only one metabolically active nodule in the right lung. What treatment would you suggest?
Select one:

a. Neoadjuvant chemotherapy, after that radical surgery – lobectomy
b. Radical surgery – lobectomy, after the surgery adjuvant chemotherapy if needed
c. Biological therapy with tyrosine kinase inhibitors
d. Radiofrequency ablation
e. Mediastinal lymph node biopsy and, according to the histology, either radical surgery – lobectomy, or chemo-radiotherapy

A peripheral nodule in the right upper lobe (18 mm in diameter, with no involvement of visceral pleura) was found on the CT scan in a 53-year-old man, who was previously healthy, has no complaints and has a normal pulmonary function. Transthoracic needle aspiration biopsy was performed. Histologically adenocarcinoma with EGFR gene mutation was verified. Chest CT scan showed no lymph node enlargement. PET/CT scan of the body showed neither lymph node nor distant metastasis, and only one metabolically active nodule in the right lung. What would be the clinical TNM stage of lung cancer?
Select one:

a. cT1cN2M0
b. cT3N1M0
c. cT1aN1M0
d. cT1bN0M0
e. cT2bN0M1b

The 26-year-old man complains of pain in the left side of his chest, which lasts for about 1 week and intensifies when he inhales deeply. He has been training intensively daily for the last 6 weeks. He does not smoke or drink alcohol, but once used cocaine. It has a temperature of 37.1 ° C, a pulse rate of 75 / min and a blood pressure of 128/85 mm Hg. Physical examination revealed local soreness in the upper left near the sternum. A chest X-ray was performed without pathology. What diagnosis will you suspect?
Select one:

a. Pulmonary artery embolism
b. Panic attack
c. Chondritis
d. Angina
e. Pneumothorax

Costochondritis is inflammation of:

the cartilage connecting ribs to sternum.

It commonly causes:

sharp localized chest pain
pain reproducible with pressing on chest wall
pain worse with movement/deep breathing

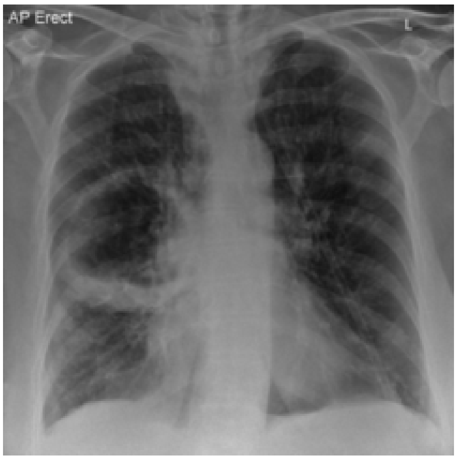
25-year age man admitted to the reception department with high temperature (38.8 C), diarrhea (5-8x a day), very high general weakness. Sick for three days. Your first steps:
Select one:

a. Determination of K, Mg in blood test
b. Colonoscopy
c. Rectoscopy
d. Retrograde intestinal examination with contrast
e. Determination of total protein in the blood test

23 year old female is referred to a gastroenterologist due to diarrhoea 6 times/day with occasional blood in the stool for about 6 months, abdominal pain, intermittent subfebrile temperature, joint pain. Ulcerative colitis is suspected. Which investigations are indicated to prove the diagnosis?
Select one or more:

a. Full blood count, CRP, stool test
b. Colonoscopy
c. Computerized tomography of the abdomen and pelvis
d. Calprotectin
e. Oesophagogastroduodenoscopy

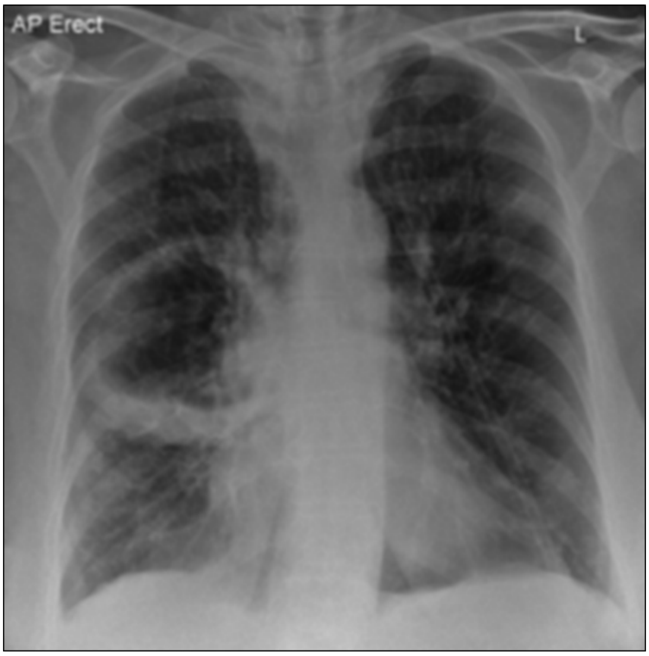
A 88 year old patient is ill with tuberculosis of lung. On X-ray you can see the clear large tuberculous cavity. Which statements are right providing cavity syndrome?



Select one or more:

a. Auscultation: bronchovesicular breath sound (possible amphoric), added sounds – coarse cracles
b. Inspection: tachypnea, clubbing
c. Percussion- hyperresonant/tympanic note
d. Palpation (vocal fremitus) – decreased
e. Palpation (vocal fremitus) - increased

A 88 year old patient many years is ill with tuberculosis of lung. On X-ray you can see the clear large tuberculous cavity. Which statements are right providing cavity syndrome?

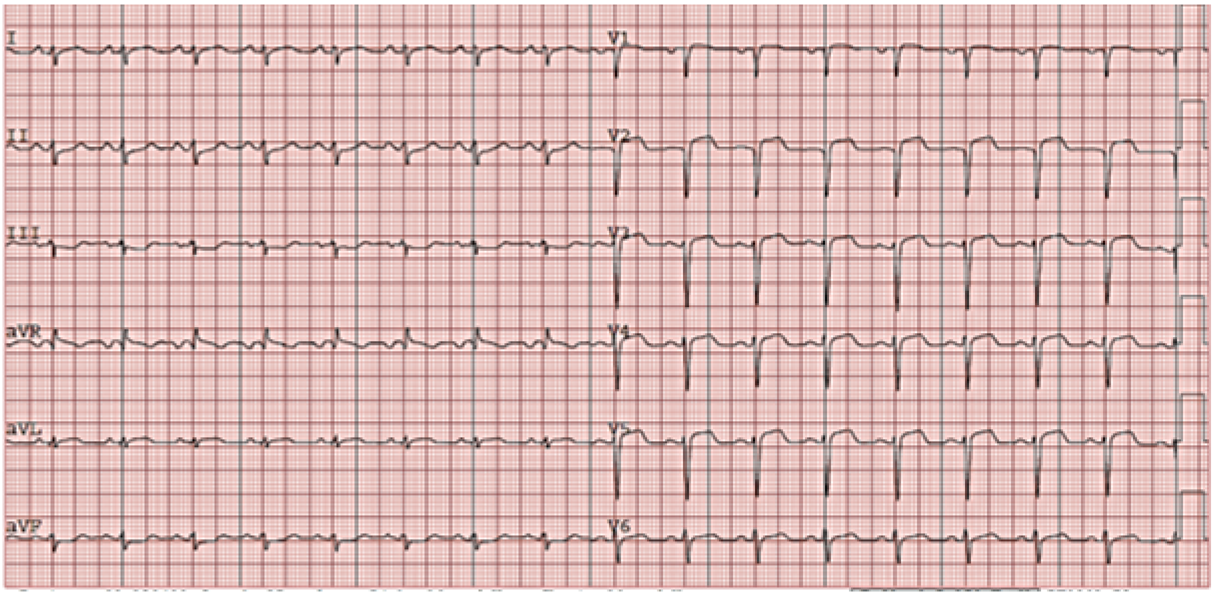


Select one or more: **a,d wrong / c+d+e wrong**

a. Auscultation: bronchovesicular breath sound (possible amphoric) (Anja)
b. Palpation (vocal fremitus) – decreased
c. Added sounds – coarse crackles (Anja)
d. Percussion - hyperresonant/tympanic note (Anja)
e. Inspection: tachypnea, clubbing (Anja)

→ Same as upper one :) (Vici)

A 55-year-old obese woman develops pressure-like substernal chest pain 3 h in duration. Her ECG is shown below. The most likely diagnosis is:



Select one:

a. Acute anterior-lateral myocardial infarction
b. Cholecystitis
c. Costochondritis
d. Pericarditis
e. Oesophageal reflux
f. Acute inferior myocardial infarction

A female full-term newborn was born via natural birth at a local hospital. The newborn weighed 3.5 kg and scored 8 and 9 according to Apgar. The mother had chorioamnionitis and prophylactic antibiotics were prescribed during pregnancy. After birth, the condition of the newborn is satisfactory.
Complaints: a 2-day-old newborn started to have a fever, suckled slowly from the breast, became sleepy.
Clinical evaluation: During the examination, she is sleepy, moaning, body temperature - 38.5 °C. Vital signs: heart rate 150 bpm, respiratory rate 70 bpm, saturation - 95%. The abdomen is soft, not distended. There was no rash or other visible changes.
Investigations: in CBC WBC 36x109/l; WBC left shift, immature to total neutrophil ratio 0.3; CRBP– 18 mg/l.
Based on the clinical signs and laboratory findings, what is the most likely diagnosis for the newborn?
Select one:

a. Transient tachypnea of the newborn
b. Neonatal sepsis
c. Hypoglycemia
d. Hemolytic disease of the newborn
e. Congenita hard disease

Patient was lifting a heavy box. Suddenly felt a severe back pain with irradiation to the leg. In a half an hour – numbness of both legs and weakness of the left leg. Emergent CT scan – possible lumbar disc herniation.
Main two management steps? Select one or more:

a. Lumbar MRI
b. Paravertebral blockade
c. Emergency surgery
d. Bed rest, analgesics
e. Scheduled surgery

A 30-year-old engineer presented to the emergency department with a history of fever, shaking chills and mid-epigastric discomfort which appeared the night before. Three weeks before the patient returned from a business trip to India where he had been staying for a month. The night before he complained about a headache, nausea and herpetic rash on lips. Then he began to have a temperature with shaking chills, became anxious and exited; the temperature rose to 39°C. One hour later chills subsided, but temperature rose to 40.1°C. Four to five hours later he broke into the sweet and fell asleep. The temperature went to normal.
Which diagnosis should be suspected (confirmed or denied) first?
Select one:

a. Yellow fever
b. Dengue feverhg
c. Malaria
d. Enteric fever
e. Typhoid fever

A 35-year-old woman came to the emergency department because of the severe headache with nausea and vomiting. She reports that her current right-side throbbing headache with significant photophonophobia is lasting 2 days, today she had severe vomiting, and her usual painkillers were not effective. She has similar, but not so severe headache attacks since 25-year-old. Before attacks she feels sleepy and frequently yawns. Vital signs and neurological examination are normal. What cause of this headache do you suspect?
Select one:

a. Acute meningitis.
b. Cluster headache.
c. Migraine without aura.
d. Subarachnoid hemorrhage.

e. Migraine with aura.

Your patient is a 64 year old man who has been diagnosed with chronic lympholeukaemia 2 years ago. Due to progression of the disease the patient got immunochemotherapy according to FCR protocol (fludarabine, cyclophosphamide, rituximab). The treatment was finished 3 months ago, but the patient complains of progressive dyspnea, fatigue and palpitations. Patient's wife has noted that the patient has jaundice. Complete blood count: HGB 65 g/L, MCV 120, WBC 4,5 x $10^9$/L (lymphocytes 10%, neutrophils 80%, bands 4%, monocytes 6%) PLT 178 x $10^9$/L, reticulocytes 15%, total bilirubin 86 µmol/L, direct bilirubin 24 µmol/L. What condition do you suspect and which tests are needed to support your diagnosis?
Select one:

a. Immune hemolytic anemia, you will perform direct and indirect Coomb's test
b. Bleeding from the upper gastrointestinal tract, you will perform fibrogastroduodenoscopy to find the site of bleeding
c. Anemia due to vitamin B12 deficiency, you will test vitamin B12 concentration in blood serum
d. Folic acid deficiency, you will test Fe concetration in blood serum

A 60-year-old male patient on aspirin, nitrates, and a beta blocker, being followed for chronic stable angina, presents to the emergency department with a history of two to three episodes of more severe and long-lasting anginal chest pain each day over the past 3 days. His ECG and cardiac enzymes are normal. The best course of action of the following is to: please try d
Select one:

a. Discharge the patient from the emergency department with increases in nitrates and beta blockers
b. Admit the patient and begin intravenous digoxin → False (julia)
c. Admit the patient for observation with no change in medication
d. Admit the patient and begin intravenous heparin (?)
e. Admit the patient and give prophylactic thrombolytic therapy (maria)

A 45-year-old man presents with ongoing chest pain. Immediate observations reveal blood pressure 140/80 mmHg, heart rate 90 bpm, and saturation 99% on room air. What do you do next?
Select one:

a. Gain IV access
b. Perform 12-lead ECG
c. Administer oxygen
d. Give aspirin 300 mg
e. Nothing, the patient is healthy

56 year old male is hospitalized with biliary pancreatitis. Laboratory workup shows neutrophilic leucocytosis WBC 14 x 10*9/l, NEU 74%, CRP 76g/l, lipase 1569U/l, no jaundice, mild increase in liver enzyme activity. Sonoscopy reveals signs of acute pancreatitis, small gallbladder stones, no dilation of biliary tract. Which statements about following workup and treatment modalities are TRUE?
Select one or more:

a. In case of a mild biliary pancreatitis cholecystectomy should be performed during the same hospitalization
b. Aggressive fluid resuscitation of 60 – 80ml/kilo/day is indicated
c. In case of clinical and laboratory workup worsening a computerized tomography is indicated on the 5 – 7th day
d. An emergency endoscopic retrograde cholangiography and lithectomy is indicated in the first 24 hours of hospitalization
e. Patient cannot receive enteral nutrition in the first 72 hours of hospitalization

A 75-year-old man with a background of type 2 diabetes mellitus and rheumatoid arthritis is seen on the daily ward rounds on the surgical care unit 6 days following an elective laparoscopic left hemicolectomy for a T3N0 sigmoid cancer. The patient has suprapubic pain, poor appetite and fatigue and has not been mobilizing with physiotherapy. Examination reveals some mild tenderness suprapubically and normal vital signs. His daily labs show a static CRP of 230 mg/L. Images of chest x-ray normal. What is the next best step in the management of this patient?

Select one:

a. Barium enema
b. Commence broad-spectrum antibiotics
c. CT scan of abdomen and pelvis with rectal contrast
d. Return to theatre for laparotomy and defunctioning of anastomosis

Advanced Cardiac Life Support is performed for the patient due to ventricular fibrillation. Defibrillation is performed 2 times, chest compressions and ventilation are resumed. After assessment appears that ventricular fibrillation persists, defibrillation is performed for the third time, chest compressions and ventilation are resumed. What intravenous drugs are recommended for this patient?

Select one or more:

a. Epinephrine 1 mg
b. Sodium bicarbonate, 100ml
c. Magnesium sulphate 1 g
d. Amiodarone 300 mg
e. Atropine 1 mg

73 years old male presented with complaints of painless, gradual loss of vision in his left eye. No previous ocular procedures or trauma. Medical history: diabetes mellitus. Family history: mother blinded with one eye.

Status ophthalmicus:
Best corrected visual acuity
Oculus dexter = 1.0
Oculus sinister = 0.9
Intraocular pressure:
Oculus dexter = 20 mmHg
Oculus sinister = 26 mmHg
Slit lamp examination:
Oculus dexter: unremarkable.
Oculus sinister: anterior segment examination: unremarkable. Ophthalmoscopy: pale optic nerve head with 0.8 cup-to-disc ratio and superior notch.
Humphrey visual field: inferior arcuate defect of the left eye.
What is the likely diagnosis and further examination(s)?

Select one:

a. Glaucoma. Gonioscopy and perimetry
b. Diabetic neuropathy. Optical coherence tomography
c. Retrobulbar neuritis. Neurological examination
d. Ocular hypertension. Refractometry to measure central corneal thickness
e. Angle closure glaucoma. No further examination needed

A 57-year-old female is complaining of sudden, unpainful decreased vision in the left eye. The patient has a medical history of arterial hypertension, takes antihypertensive drugs irregularly, blood pressure is elevated, patient also smokes.
Examinations reveal: V RE = 1.0 , V LE = 0.05 (not correctable); Tn RE = 17.3 mmHg, Th LE = 17.3 mmHg
In the fundus: RE – without pathological changes. LE – optic nerve disc is swollen, hemorrhages on the optic nerve disc and in the whole retina, retinal veins are wide and tortuous, several soft exudates. The fundus looks like "Squashed tomato".
What is the initial preliminary clinical diagnosis?
Select one:

a. Chorioretinitis in the left eye
b. Retinal detachment in the left eye
c. Central retinal vein occlusion in the left eye
d. Hypertensive retinopathy more significant in the left eye
e. Intraocular tumor in the left eye

A 56-year-old woman presents to the emergency department referring to abdominal pain and jaundice. On physical examination, the Courvoisier sign is positive with a negative Murphy's sign. Ultrasound shows a non distended gallbladder with wall thickening and mild biliary dilatation. The patient has a type 1 choledochal cyst, which has an area of focal soft tissue thickening with the vascular flow. What type of treatment would be recommended from the Bismuth-Corlette classification for cholangiocarcinoma?
Select one:

a. No treatment recommended
b. Orthotopic liver transplant followed by chemotherapy
c. Surgery followed by chemotherapy
d. Chemotherapy without surgery

What is this disorder?
For the first time in her life, the patient had a seizure during which her heart was beating violently, her tights were breathing, her hands were shaking, she was cold sweat, she was feeling a lot of discomfort in her stomach, she was very afraid, she was under the impression of dying or going crazy. The environment seemed to have changed at intervals. This condition grew stronger, very confused, called an ambulance. He doesn't remember what medications he injected, but he gradually felt better. However, there remained a strong fear that such attacks could recur. Seek medical advice, somatic health tests were performed. No somatic pathology was identified. The patient lives in fear and tension as the aforementioned seizures recur several times a week. Select one:

a. Specific phobia
b. Panic disorder
c. Somatoform autonomic dysfunction
d. Hypochondriacal disorder
e. Acute stress reaction

A 20-year-old patient complains of having difficulty breathing through the nose, which lasts for about 4 years. The patient has not taken any medication before. Consulted an allergologist - no allergies have been identified. Anterior rhinoscopy – septum is straight, lower nasal turbinates are swollen, bluish-pink. Anemization of the nasal cavity was performed and breathing became sufficient. What treatments tactics are possible in this case?
Select one or more:

a. Partial conchotomy
b. Septoplasty
c. Total conchotomy
d. Radiofrequency thermal ablation

e. Submucosal resection of the nasal turbinates

67 years old man complains of the pain in the right knee, lasting for about 8 years. Pain is gradually increasing. At the moment patient states, that the pain intensity is 3/10 points according to VAS score. Pain increases after long walks or while climbing stairs, pain decreases after rest. There is no morning stiffness.
Physical exam: BMI 31. Valgus deformity of right knee. Right knee is painful, coarse crepitation is felt during joint movements.
X-rays: right knee joint space narrrowing, bony osteophytes and subchondrial sclerosis are present.
What treatment would you prescribe?
Select one or more:

a. Ointments with non-steroidal antiinflammatory drugs
b. Intraarticular glucocorticoid injection
c. Exercise, rehabilitation procedures
d. Methotrexate
e. Paracetamol

A 45-years-old woman was found to have elevated calcium levels in the blood tests by family physician. The kidney function is normal. What other study would you recommend to determine the cause of hypercalcemia?
Select one:

a. Test of vitamin D concentration in blood
b. Bone density examination
c. Test of calcitonin levels
d. Thyroid hormons tests
e. Test of parathyroid hormone (PTH) concentration in blood

20 year-old woman came to the neurologist complaining for the impaired right-eye vision for 3 days, left-side numbness, weakness in left extremities and impaired balance. She reported an episode of left optic neuritis vision 2 years ago, vision improved within 2 weeks. Neurological examination: right–eye vision 0.2, horizontal nystagmus to the right, left eye deviation to the lateral side, brisk tendon reflexes (left> right), positive Babinski sign on the left. Positive Barré test (pyramidal drift) was prominent in the left extremities. Limb ataxia (left>right), urgent urination. What could be the diagnosis?
Select one:

a. Parkinson disease.
b. Acute stroke in a. cerebri media right side.
c. Multiple sclerosis. Secondary progressive disease course.
d. Migraine.
e. Multiple sclerosis. Relapsing remitting disease course.

Multiple sclerosis (MS) is a disease where the immune system attacks the myelin covering of nerves in the brain and spinal cord.
The BIG clue in this case is: young woman + optic neuritis + neurologic symptoms occurring at different times in different places of the CNS.

47 years old male patient noticed sudden, severe pain in the right flank one month ago. Pain periodically appeared again, there was irradiation of pain to the right inquinal region, right testicle. Today 38 C fever appeared and patient came to the family doctor. Physician suspected serious surgical disease and sent patient to the hospital. Sonoscopy: right kidney hydronephrosis. What disease do you diagnose?
Select one:

a. Benign hyperpasia of prostate
b. Stone of the right ureter with hydronephrosis and pyelonephritis
c. Tumour of right ureter.
d. Severe cholecystitis
e. Severe pancreatitis

A 28-year-old male complains of fever, coughing and fatigue for three days. Never smoker. He has no concomitant chronic diseases. No history of antibiotics usage during this recent year. Physical examination: respiratory rate 16 times per minute, arterial blood pressure 130/80 mmHg, heart rate 86 times per minute. On auscultation small amount of rales on right lung lower lobe. Chest X-ray shows opacity in the 9th and 10th segments of the right lung. CRP 48 mg/l. WBC 10 x 109/l. No social risk factors. What treatment will you prescribe and where will you treat the patient? Which answer is correct?
Select one:

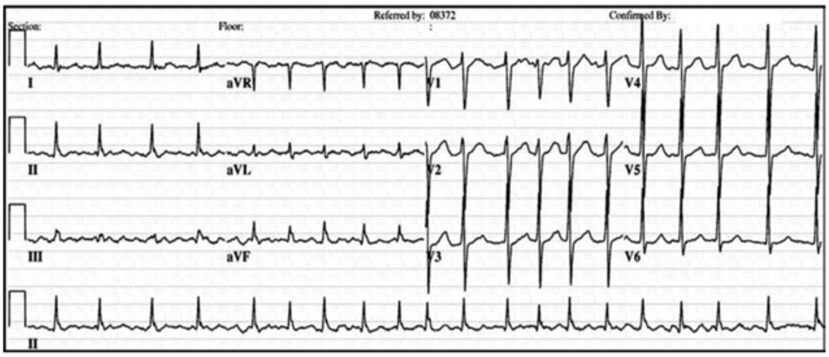
a. Oral amoxicillin 1 g 2 times a day. Out-patient treatment.
b. Intravenous ampicillin 1 g 4 times a day and hospitalization.
c. Oral amoxicillin 1 g 4 times a day. Out-patient treatment.
d. Oral amoxicillin 1 g 4 times a day and hospitalization.
e. Intravenous ampicillin 1 g 3 times a day and hospitalization.

Patient with CKD stage 5 secondary to hypertensive nephropathy has been on dialysis for 6 years. She has arteriovenous fistula in the right arm. Recently, she presents with carpal tunnel syndrome, arthralgia, progressive peripheral artery disease. What is the possible cause of these symptoms?
Select one:

a. Dialysis related amyloidosis due to beta2-microglobulin deposition
b. Dialysis related transthyretin amyloidosis
c. Dialysis related free immunoglobulin G light chain deposition
d. Progression of the disease that caused CKD
e. Insufficient blood flow in the left arm

A 75-year-old woman presents to the ED with severe shortness of breath at rest.
She has a history of hypertension for 35 years. A recent echocardiogram revealed an EF of 65%, LV hypertrophy, and a pseudonormal pattern of ventricular diastolic filling.

- Vital Signs
  - BP: 192/45mmHg
  - HR: 108 bpm, irregularly irregular
  - Respiration: 34 per min
  - Oxygen saturation: 86%, room air
- Laboratory
  - Creatinine: 140 mkg/l
  - Troponin T: normal
- ECG:



- Portable chest radiograph:

What is the rhythm disturbance seen on ECG?
Select one:

a. Sinus rhythm
b. Atrial fibrillation
c. Atrial flutter
d. Supraventricular tachycardia
e. Ventricular tachycardia

36 years old woman, pregnancy II (I) 32 weeks, treated with methyldopa and labetalol cause of gestational hypertension, few days feels headache. During visit to the doctor elevated blood pressure was measured, BP 190/110 mmHg, In urine sample: proteinuria 5 g/l. Your diagnosis and treatment tactics:
Select one:

a. Gestational hypertension, ambulatory treatment with maximum dose of Methyldopa, add tab. Nifedipini.
b. Eclampsia, immediate hospitalization to Intensive care unit.
c. HELLP syndrome, labor induction.
d. Pre-eclampsia, immediate hospitalization to the prenatal pathology department.
e. Pre-eclampsia, ambulatory treatment with maximum dose of Methyldopa, add sol. MgSO4 seizure prophylaxis

In a blood sample performed during routine check-up you find: Hb 140 g/l, MCV 89 fl, platelets 170 x 109/l, leukocytes 110 x 109/l, lymphocytes 85%, neutrophils 15%, reticulocytes 1,5%. Which test is needed to confirm the diagnosis:
Select one:

a. Bone marrow biopsy
b. Abdomen ultrasound
c. Immunophenotyping of the peripheral blood
d. No further testing is needed; the patient needs follow-up

This patient has marked lymphocytosis strongly suggesting Chronic lymphocytic leukemia (CLL).
The diagnosis is confirmed with immunophenotyping (flow cytometry) of peripheral blood, which identifies the characteristic abnormal B-cell population.

White blood cell count: Leukocytes 6,6x109 /L, erythrocytes 4,2x1012 /L, Hb 105g/L, MCV 71fl, MCH 22 pg, leucogram – normal. ESR 10mm/h. Feces examination (coprogram): leukocytes 8 high power field, no occult blood. What disease you can suspect?

a. Irritable bowel syndrome
b. Ulcerative colitis
c. Coeliac disease
d. Munchausen syndrome
e. Leukemia

This patient most likely has Celiac disease causing iron deficiency anemia from malabsorption.

The key clue is microcytic anemia without GI bleeding, suggesting poor iron absorption rather than blood loss or inflammation.

40-year-old male, suffering for 10 years with ankylosing spondyloarthritis. Currently the patient has bilateral sacroiliitis, knees and ankle joints are swollen and there is plantar fasciitis. This year the patient had anterior uveitis. Stiffness in the morning for 3-4 hours duration. Treated 5 years previously with sulfasalazine but was withdrawn due to allergy, a year ago methotrexate was prescribed, but had to be discontinued due to increase in liver enzymes. Takes NSAIDS every day. Current labs: CRP - 32 mg/l, ESR - 65mm/h. Referred to rheumatology department for determination of appropriate treatment. What are the appropriate treatments?
Select one:

a. TNF alfa blocker
b. Methotrexate
c. Antibiotics
d. Sulfasalazine
e. Cyclophosphamide

A 78-year-old female presents with groin pain for the last 2 days and vomiting for the last day. The patient states that the groin pain happened during yoga and she thought it was just a groin strain. During the physical exam, there is a noticeable bulge in her left groin. Her WBC count is 16 x 10^9/L, arterial lactic acid is 5.2 mmol/L, and her abdominal x-ray shows signs of a small bowel obstruction. What is the most appropriate next step in this patient's care?
Select one:

a. Manual reduction of the hernia with sedation
b. Open femoral hernia repair with bowel resection and mesh repair
c. Exploratory laparotomy with possible bowel resection and repair of the hernia at a later stage
d. Exploratory laparotomy with possible bowel resection and mesh repair of the hernia

A 50-year-old man presented to a local clinic with headaches and a progressing rash on his trunk. On physical examination, she had a large circular red rash on his back with a bull's-eye appearance, 16 × 18 cm in diameter. The patient could recall a walk through the woods 3 weeks prior. Serologic tests confirmed a diagnosis of Lyme disease. Treatment options for this patient: Select one:

a. Oral antihistamines
b. Systemic antibiotics
c. Topical steroids
d. Emollients
e. Topical antibiotics

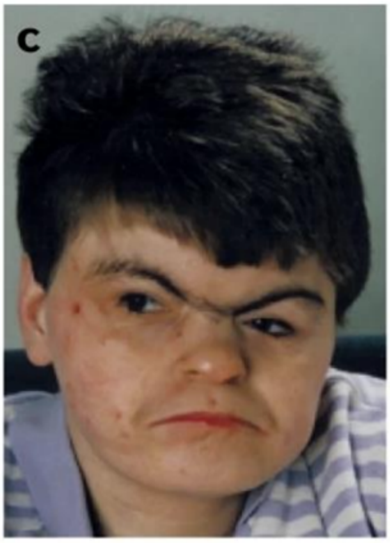
What is the first line therapy for newly diagnosed renal clear cell carcinoma T3aN0M1 with multiple bone and pulmonary metastases? Select one:

a. Biological therapy with sunitinib
b. Radical nephrectomy as monotherapy
c. Hormonal treatment with LH-RH agonist
d. Radiotherapy of the kidney.
e. Cisplatin chemotherapy

During an epidemic of influenza, 72 years old man got ill. He had high temperature (39ºC), headache, muscle pains, sore throat, cough. A day before he had a contact with his granddaughter who had temperature and was coughing. The man was not vaccinated against influenza. The patient went to the doctor on the second day of disease. His analyses were: WBC 3 x $10^9$/l, Hb 120 g/l, PLT 100 x $10^9$/l, CRB 8 mg/l. No infiltration was found in the chest X-ray. There was no opportunity to perform the influenza testing. What treatment should by appointed? Select one or more:

a. Rimantadinum
b. There is no need of any treatment, as the viral infection is suspected with no possible etiological treatment
c. A lot of fluids to drink, antipyretics when temperature is higher than 38ºC
d. Antibiotics
e. Oseltamivirum (*Tamiflu*)

Which set of clinical features is characteristic for your patient based on the phenotype provided in the photos:



Select one:

a. Ocular coloboma, choanal atresia, hypoplasia semicircular canals, intellectual disability
b. Synophrys, thick eyebrows, short nose, long and smooth philtrum, thin upper lip vermilion, global development delay, microcephaly, hirsutism, short fifth finger
c. Nosebleeds, abnormal blood vessels on the skin, gastrointestinal bleeding; bleeding into the brain haemoptysis
d. Dolichocephaly, skin striae, pectus excavatum, plain pes planus, normal intelect
e. Attention deficit hyperactivity disorder, generalized anxiety and in the most severe cases, psychosis, immune system difficulties, nasal speech

24 years old male is treated in intensive care unit due to fever, weakness, severe headache and nausea. The onset is 1 day before. Obj.: febrile fever, drowsiness, hemorrhagic rash of the abdomen and hands. No focal neurological signs. There are positive meningeal signs. CT – without focal changes. Cerebrospinal fluid (CSF): cell count 5000/3, neutrophils predominate; protein - 1,5 g/l, decreased level of glucose Gram stain of CSF: inflammatory cells and gram-negative diplococci. What is the diagnosis?
Select one:

a. Lyme disease

b. Tick-borne encephalitis
c. Herpes simplex virus encephalitis
d. Meningococcal meningitis
e. Aseptic meningitis

64 year old male came to ER due to vomiting, nausea, dyspnea, numbness in limbs. Blood tests revealed hemoglobin 100 g/l, creatinine 750 mkmol/l, urea 62 mmol/l, potassium 7,2 mmol/l, pH 7,02, HCO3 12 mmol/l, phosphate 2,25 mmol/l. Also, pulmonary edema in chest X-ray. 6 hours after furosemide bolus, the patient remained anuric. Which are indications for renal replacement therapy in this case?
Select one:

a. Volume overload
b. Hyperkalemia
c. Acidosis
d. Uremic symptoms
e. All mentioned

A 74-year-old patient with end-stage renal disease due to hypertensive nephropathy has been dialyzed for 8 years via arteriovenous fistula in the right arm. Recently, she presents with left carpal tunnel syndrome, arthralgia, progressive peripheral artery disease. What is the possible cause of these symptoms?
Select one:

a. Insufficient blood flow in the left arm
b. Dialysis related transthyretin amyloidosis
c. Dialysis related amyloidosis due to beta2-microglobulin deposition
d. Hypertensive nephropathy
e. Renal osteodystrophy

A 64-year-old man underwent coronary artery bypass surgery the day before. He claims to see several men standing in his room by the windows. The night shift nurse reports that the patient was agitated and restless, disoriented in time and place. He had never seen anything unusual before and had no mental disorders. What is a mental disorder?
Select one:

a. Panic attack
b. Delirium
c. Dementia
d. Paranoid disorder
e. Hallucinosis

A 43-year-old woman had acute onset of shortness of breath and light-headedness. She had a history of rheumatic fever and subsequent mitral valve regurgitation. On physical examination, she was pale and tachypnoeic. HR was 95 bpm and regular, with a low-volume pulse. BP was 95/44 mmHg. There were bilateral pulmonary rales with associated lower extremity oedema and elevated jugular venous pressure. A new murmur was present. The next step in your evaluation should be:
Select one:

a. Stress echocardiography
b. TTE (transthoracic echocardiography)
c. Cardiac catheterization
d. Cardiac CT
e. Bicycle exercise test

A 43-year-old woman had acute onset of shortness of breath and light-headedness. She had a history of rheumatic fever and subsequent mitral valve regurgitation. On physical examination, she was pale and tachypnoeic. HR was 95 bpm and regular, with a low-volume pulse. BP was 95/44 mmHg. There were bilateral pulmonary rales with associated lower extremity oedema and elevated jugular venous pressure. A new murmur was present.
An echocardiogram in patient is performed and shows the presence of mitral regurgitation (MR). What is the most frequent cause of MR leading to surgery in the Western Europe and US?
Select one:

a. Infective endocarditis
b. Mitral annular calcification
c. Ischemic MR
d. Mitral valve prolapse
e. Rheumatic disease

A 36-year old man, who was diagnosed with HIV infection 8 years prior to presentation but taking care irregularly and never prescribed antiretrovirals, presented with blurred vision in the left eye. His last immunological examination had been performed two years before and revealed a CD4 count of 110/mm$^3$. The patient has been taking prophylaxis with trimethoprim-sulphamethoxazole 160 mg/800 mg once a day 3 times a week.
On physical examination, his temperature was normal, oral thrush noticed with no peripheral lymphadenopathy and rash; his heart rate was of 88 beats/minute, his pulmonary and neurological examination unremarkable, his weight 63kg (5 kg weight loss over the period of 3 months).
His laboratory values: WBC – 3.2 x 10$^9$/l, Hb 102 g/l, platelets 110 x 10$^9$/l; CD4 cells count 12/mm$^3$ and HIV RNA 365 000 copies/ml.
Dilated funduscopic examination revealed perivascular yellow-white retinal infiltrates with intraretinal haemorrhage preserving macula in the left eye.
Which preliminary diagnosis should be suggested first?
Select one:

a. Epstein – Barr virus chorioretinitis
b. Cytomegalovirus chorioretinitis
c. *Varicella-zoster* chorioretinitis
d. *Toxoplasma* chorioretinitis
e. *Candida* chorioretinitis

A 6-year-old boy fractured forearm bones Salter-Haris II type. He had his arm immobilized in plaster. After 2 weeks you perform a control X-ray and detect the 10 degree angular dislocation. What tactic do you choose? Select one:

a. Repeat closed repositioning and perform osteosynthesis
b. Open repositioning and osteosynthesis
c. Do nothing – deformation will remodel

A 6-year-old boy fractured forearm bones Salter-Haris II type. He had his arm immobilized in plaster. After 2 weeks you perform a control X-ray and detect the 20 degree angular dislocation. What tactic do you choose?
Select one:

a. Do nothing – deformation will remodel
b. Repeat closed repositioning and perform osteosynthesis
c. Open repositioning and osteosynthesis

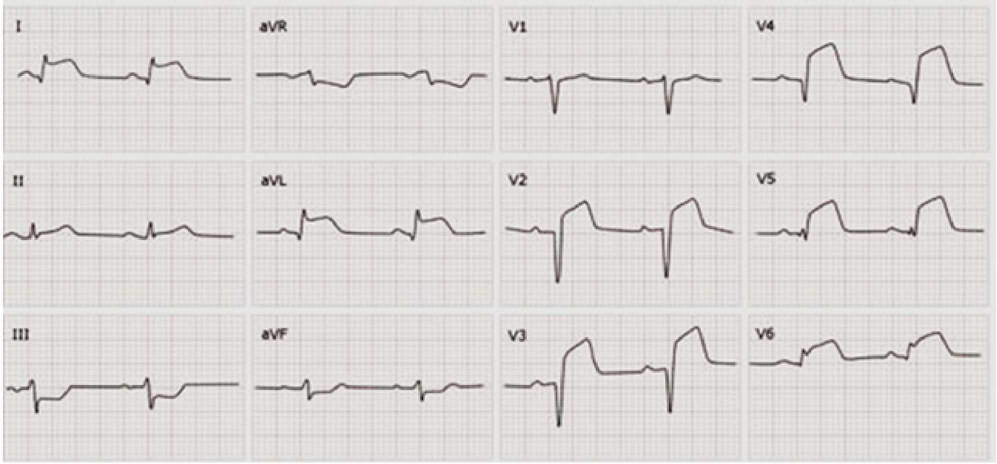
Patient had an acute viral respiratory tract infection 4 weeks ago, complicated with an acute bronchitis. Patient is still coughing. He has no fever, no shortness of breath. Patient’s vital signs are normal. Which answer is correct?
Select one:

a. I'll prescribe treatment with antibiotics.
b. I will not prescribe any medications, instrumental or radiographic examinations.
c. I will order chest X-ray and spirometry.
d. I will prescribe a non-steroidal anti-inflammatory drug (NSAIDs) and mucolytics (e.g. acetylcysteine).
e. I will prescribe mucolytics (e.g. acetylcysteine).

Patient had an acute viral respiratory infection 4 weeks ago, complicated with an acute bronchitis. The patient is still coughing. He has no fever, no shortness of breath. Patient's vital signs are normal. Which answer is correct?

a. I will not perform any laboratory, instrumental or radiological tests.
b. I will order spirometry.
c. I will perform blood test for C-reactive protein.
d. I will order chest X-ray.
e. I will order chest X-ray and spirometry.

A 74-year-old obese woman was admitted to the ED because of chest pain that started 3 hr ago. She is now pain free, following morphine that was administered in the ambulance.
ECG was performed:



The next best step for management of the patient presenting will be:
Select one:

a. Ibuprofen
b. Emergency cardiac catheterization
c. Thrombolytic therapy
d. Echocardiography
e. Pericardiocentesis

What is this disorder?
The patient was 19 years old taken to a psychiatric hospital from the airport. He went on a business trip a week ago. While abroad, he felt a lot of tension, did not sleep at night, worked a lot, prepared for an important exhibition. After three days of tension, it suddenly became an incomprehensible behavior. He communicated with those around him mysteriously, suspiciously, it seemed that a conspiracy was taking place around him, he was being persecuted, he was filming, the world was divided into two parts, he saw significant glances, he heard voices from TV, radio and computers. Began to hide. The co-workers tried to

reassure him, but he ignored them, saying they had hired him to kill him. The co-workers changed the flight ticket and flew back to Vilnius with the accompanying person.
Select one:

a. Acute polymorphic psychotic disorder
b. Severe depressive disorder with psychotic symptoms
c. Paranoid schizophrenia
d. Delirium, unspecified
e. Mania with psychotic symptoms

The patient had urticaria and angioedema when using amoxicillin 2 years ago. He is currently healthy but wants to know if he can use penicillin antibiotics. What can be done? Select one:

a. Allergic skin testing and challenge with penicillin antibiotics may be performed.
b. Skin tests with amoxicillin may be performed.
c. Penicillin group antibiotics must not be used and another class of antibiotics should be prescribed.
d. No action required, medication can be taken by patient.
e. Allergic skin tests with penicillin antibiotics may be performed.

A 42-year-old patient complains of having red eyes, foreign body sensation, discharge for 2-3 days. The patient suffers from bronchitis for 1 week and is taking antibiotics prescribed by general practitioner.
On examination: V RE=1.0 , V LE=1.0
Both eyes: superficial conjunctival injection, mucopurulent discharge in the conjunctival sac. Other ocular adnexa and eye globes – normal.
What is diagnosis? Select one:

a. Bacterial conjunctivitis in both eyes
b. Vernal conjunctivitis in both eyes
c. Cicatrical pemphigoid in both eyes
d. Purulent uveitis in both eyes
e. Trichiasis

A 30-years-old man presented to the emergency department 1 hour after a motor vehicle accident. He is tetraplegic, loss of sensations down to cervical 5 level, urinary retention, blood pressure stabile. CT scan – C4/C5 subluxation with a 60% of cervical spinal canal compromise. Management options (could be two correct answers):
Select one or more:

a. Close reduction and Halo-Vest immobilization
b. Percutaneous needle vertebroplasty
c. Full traumatic myelitis – symptomatic treatment only
d. Open surgery – anterior approach, C4/C5 repositioning and plating
e. Cervical collar

35 y old female diagnosed with ulcerative colitis started to take mesalazine. After 3 months she had fever, fatigue and consulted the family doctor. Blood test showed eosinophilia. Her creatinine level was 315 µmol/l and in a couple of days reached 640 µmol/l. Urine test: several leukocytes, erythrocytes and mild proteinuria. Urine culture: E.coli 102 CFU/ml. What is your diagnosis?
Select one:

a. IgA nephropathy
b. Autoimmune interstitial nephritis
c. Acute pyelonephritis
d. Severe mesalazine induced interstitial nephritis

e. Interstitial nephritis associated with vasculitis

Patient suffers from GERD. Recently he started to suffer from difficulties of swallowing of hard fud (rice, bred). He has no odynophagia, weight loss, vomiting or other symptoms. What of following diseases are more likely?
Select one or more:

a. Stricture of esophagus
b. Achalasia
c. Hiatal hernia
d. Barrett esophagus
e. Esophageal tumor

25 year old female complained of frequent voiding and urethral pain at the end of urination. Today she had fever of 38*C, left loin pain. Her laboratory tests revealed neutrophilic leucocytosis, CRP 98 mg/l, serum creatinine concentration 56 mcmol/l. Urine test: leucocyturia 500/µl, hematuria 50 mg/l, proteinuria 0,1 g/l, bacteriuria. What is the most likely diagnosis? Select one:

a. Acute appendicitis
b. Acute glomerulonephritis
c. Acute cystitis
d. Acute nephritic syndrome
e. Acute pyelonephritis

34-year-old man was referred for consultation of a rheumatologist due to several year's history of lower back pain (visual analogue scale – 6 points out of 10). According to the patient, the severity of the pain does not depend on the time of day, but is slightly more intensive at night, so he couldn't sleep well for some time. Decreased chest expansion and finger-floor distance of about 30 cm are observed during examination. What would be your next step in confirming / rejecting inflammatory spondyloarthropathy?
Select one:

a. No further testingi s required
b. HLA-B27 and sacroiliac joints X ray
c. Creatine kinase and rheumatoid factor
d. Consultation of psychiatrist
e. ANCA and chest radiograph testing

62 years obese old man was transfered from Urology department, where he was treated for renal colic. Two days ago he developed acute arthritis of left ankle, the pain is so strong, that patient cannot walk or sleep. In the past history once he have had pain in his big toe. What rheumatic disease would you consider first? Select one:

a. Deep vein thrombosis of left leg.
b. Gout
c. Osteoarthritis
d. Reactive arthritis
e. Rheumatoid arthritis

78 year old woman has been ill with shingles (Herpes zoster infection) 5 month ago. Despite resolving the acute shingles she continues experiencing pain at the site of previous herpetic rash. She is diagnosed with postherpetic intercostal nerve neuralgia. This pain is classified as neuropathic. Which medication is the first of choice for such type of pain?
Select one:

a. Diclophenac
b. Tramadol

c. Clonazepam
d. Pregabalin
e. Paracetamol

73 year-of-old female presents with progressive over 1 year paresis of the left leg, and seizures every 2-3 months. Brain magnetic resonance imaging revealed a 4 cm convexity meningioma in the right parietal area surrounded with perifocal edema. No other significant diseases. What management do you suggest?
Select one:

a. Surgical removal of the tumor.
b. Stereotactic biopsy, followed by chemo/radiotherapy.
c. Chemo/radiotherapy based on radiological findings.
d. Decompression.
e. Symptomatic treatment – the patient is too old for the neurosurgical intervention.

A 54-year old female has been diagnosed with ascending aorta aneurism. A diameter of the ascending aorta is 5 cm a year ago. During the period of last one year it increased by 0,7 cm. Patients remains asymptomatic and receives medical treatment for hypertension. What is the correct management strategy for this patient?
Select one or more:

a. Only medical management of the hypertension should be continued -
b. As diameter of 5,7 cm is normal for the ascending aorta, no treatment should be offered
c. A surgical treatment by replacement of ascending aorta should be offered
d. A surgical treatment by replacement of the aortic valve should be offered to the patient
e. A surgical management by replacement of ascending aorta and aortic valve (if significant pathology of the aortic valve is present) should be offered to the patient -

Patient is diagnosed with atrial fibrillation which requires chronic therapy. History shows, that patient has bronchial asthma and hypothyroidism for which uses thyroxin. What is the most appropriate antiarrhythmic drug to be prescribed? Select one:

a. Lidocaine
b. Propranolol
c. Amiodarone
d. Adenosine
e. Propafenone

A 55-year-old female inpatient has recently been diagnosed with a transient ischaemic attach (TIA), which was confirmed by cerebral MRI. Echocardiography and carotid ultrasound are essentially normal. Her blood pressure during admission is 145/85 mmHg. What management do you suggest?
Select one:

a. Aspirin and lifestyle changes
b. Aspirin, lifestyle changes and antihypertensive medication
c. A bubble echocardiogram to look for a patent foramen ovale
d. Aspirin
e. Lifestyle changes

A 60-year-old man presents for a general medical examination. He is asymptomatic and tolerate physical activity normally. Heart auscultation reveals a systolic murmur  with maximum intensity at the apex, which radiates to the axilla. What is the most likely causes this murmur?
Select one:

a. Aortic regurgitation
b. Ventricular septal defect
c. Mitral regurgitation (MR)
d. Mitral stenosis
e. Aortic stenosis

A young man is an unrestrained driver in a motor vehicle accident. He was transported by paramedics to the emergency room. He has received 2500 mL of lactated Ringer solution. A contusion and curvilinear abrasion is noted at the mid upper abdomen. Vital signs show a heart rate of 120 bpm, blood pressure of 80/65 mm Hg, respirations 20, and pulse oximetry 99% on 100% oxygen. Ultrasonography shows a sonolucent area between the right kidney and the liver. Neurologic exam is normal. What is the next best step in management?
Select one:

a. Insert a nasogastric tube and Foley catheter and transfer the patient to intensive care
b. CT of the abdomen and pelvis
c. Continue fluid resuscitation and perform diagnostic peritoneal lavage
d. Start transfusing packed red blood cells while transferring the patient to the operating room for exploratory laparotomy

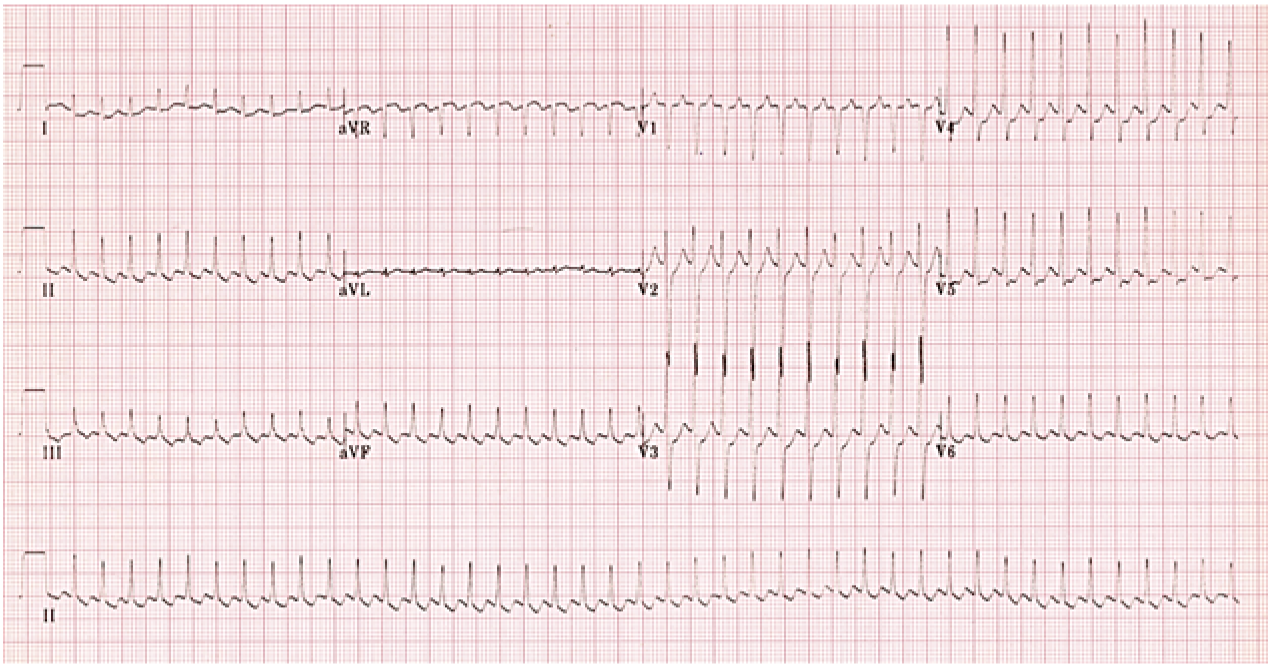
A 55-years-old woman presents after an 8-month following the right temporal lobe glioblastoma surgery, chemotherapy and radiotherapy. Karnofsky 50, left hemiparesis. MRI shows a recurrent tumor in the temporal lobe, progressing to the adjacent frontal and parietal lobes, corpus callosum also involved. It is a significant shift of the midline structures. Management:
Select one:

a. Abandon active treatment.
b. Continue with chemotherapy.
c. Stereotactic biopsy.
d. Continue with radiotherapy.
e. Open surgery, tumor removal.

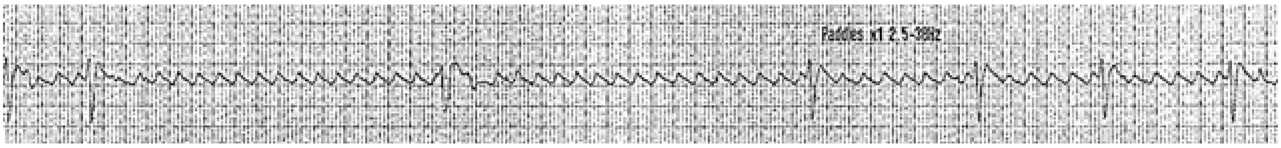
M. Kirschner’s formulated the basic principles of treatment of peritonitis:
Select one or more:

a. Drainage of the abdominal cavity
b. Antibiotic therapy
c. Eliminate toxins and necrotic material and bacteria (washing out)
d. Early surgery
e. Close the source of infection

A 52 years old woman was admitted to an Emergency unit due to rapid heart rate and shortness of breath. The symptoms persisted approximately 2 hours. She has suffered from paroxysmal atrial fibrillation and was taking flecainide 100 mg per day since last year. Otherwise, she was healthy.
A 12-lead ECG was recorded:



After administration of adenosine intravenously, one lead ECG was recorded:



What is an arrhythmia seen on the single lead ECG strip?
Select one:

a. Atrial tachycardia
b. Ventricular bigeminy
c. Atrial fibrillation
d. Asystole
e. Atrial flutter

A 54-year-old woman was admitted to the Emergency Department (ED) with a two days' history of fever, myalgia, vomiting. Initial physical examination in the ED shows facial edema, splinter hemorrhage in the nails. Hematologic and biochemical examinations revealed leukocytosis (WBC - 13 x $10^9$/l) and eosinophilia (EOS - 1,5 x $10^9$/l) and highly elevated level of creatine phosphokinase (CK - 1,500 U/L). Further exploration of the patient's medical history indicates that she was in the farm and ate domestic undercooked pork one week ago. Which one of the following diagnosis is the most probable? Select one:

a. Cystic echinococcosis
b. Trichinellosis
c. Viral meningitis
d. Ascariasis
e. Fibromyalgia

pork is trichi

64 year old woman presents to the Emergency department with bloody diarrhoea 12 times/day, febrile fever, severe general weakness. Patient was discharged from another hospital a week ago where she was treated with amoxicillin and clavulanic acid for pneumonia. Laboratory workup shows leucocytosis 19 x 10*9/l, neutrophil count 84%, increased hematocrit, decreased renal function, stool test shows visual field covered with erythrocytes and leucocytes. Most probable diagnosis is: Select one:

a. Irritable bowel syndrome with diarrhoea
b. Cl.dificille colitis
c. Adenocarcinoma of the colon
d. Inflammatory bowel disease

e. Food toxicoinfection

75 year old male patient with type 2 diabetes needs a contrast angiography due to suspected lower limb artery thrombosis. Serum creatinine is 120 mcmol/l. What should be recommended to avoid contrast induced acute kidney injury? Select one:

a. Higher than normal serum creatinine concentration is an absolute contraindication to angiography, therefore angiography should not be performed
b. To perform hemodialysis after angiography in order to remove contrast
c. Give furosemide i/v after angiography to increase diuresis
d. Give normal saline before and after contrast angiography
e. No additional action is needed

Which of these symptoms are common in Meniere disease? Select one or more:

a. Tinnitus
b. Hearing loss
c. Earache
d. Acute vertigo
e. Fever

Ménière disease is a disorder of the inner ear where excess fluid builds up, causing attacks of vertigo, ringing in the ear, and hearing loss.
It comes in episodes — patients feel normal between attacks early on.

A 35-year-old woman came to the emergency department of the hospital.
Complaints: pain in the left flank. Pain syndrome (in points): 7-8 points
Medical history: The pain started 6 hours ago suddenly, in the left lumbar area. Pain of a sharp nature, spreading to the left groin. Urges to urinate more often.
During the abdominal ultrasound, a 0.76 cm stone was observed in the lower calyx of the left kidney, left hydronephrosis. The obstruction of the upper third ureter was observed. Palpation of the kidney area is painful on the left, painless on the right. The bladder is not palpable, painless. External genitalia without visible changes.
General condition: satisfactory. Temperature: 36.6. Hematuria and leukocyturia are absent.
What are the doctor's next steps? Select one:

a. Administer analgesic and conservative treatment of stone disease
b. Perform a left nephrostomy
c. Perform endoscopic surgery: left retrograde pyeloscopy
d. Administer analgesic treatment, perform CT scan of the abdomen and pelvis- additional left ureter stone is suspected
e. Perform extracorporeal shock wave lithotripsy of the kidney stone

A 53-year-old man with a history of type 2 diabetes reports a new symptom of mild dyspnea when he walks two blocks. His heart rate is 98 beats per minute, his blood pressure is 135/54 mm Hg. A 3/6 diastolic decrescendo murmur at the right sternal border in second intercostal space becomes more apparent when the patient sits upright. Which one of the following diagnoses is most likely in this case?
Select one:

a. Aortic regurgitation
b. Mitral stenosis
c. Pulmonary insufficiency
d. Hypertrophic cardiomyopathy
e. High-output heart failure

58 years old man suffers from episodic lower extremity joints pain and swelling for 3 years. These episodes are usually in one joint, come suddenly, reaches a peak of pain within 1 day and lasts from 2 to 7 days. Big toe of the right foot is the most vulnerable, but the knee joints were also affected couple times.
On examination, joint system without visible change except for the fact that the first MTP joint of right foot is swollen and painful, valgus deformity is observed. There are no tophi noted.
Which one of the following tests is the least useful for diagnosis? Select one:

a. Concentration of uric acid in the serum
b. Synovial fluid examination
c. Concentration of CRP in the serum
d. X-ray of MTP joints
e. Urinalysis

45-year-old women was consulted because of neck pain, painful swallowing, weakness, sweating, subfebrile temperature, tachycardia. These symptoms developed 3 weeks after acute viral respiratory infection. Physical examination: skin warm and moist, heart rate 98 beats/min, BP 130/70 mmHg. Thyroid firm and painful on palpation. Blood tests: WBC 8,9 x109/l, ESR 80 mm/hour, TSH 0,001 mIU/l (0,4-4,0 mIU/L), FT4 26 pmol/l (9-20 pmol/l). What disease would you suspect?
Select one:

a. Acute thyroiditis
b. Acute tonsillitis
c. Parapharyngeal abscess
d. Graves' disease
e. Subacute thyroiditis

3 hours after platelet transfusion the patient presents with shortness of breath, crepitation in the lungs, oxygen saturation in blood <80%. Body temperature – 37.9°C, ABP 100/60mmHg, HR – 120bpm. Chest X-ray shows both-sided diffuse infiltration. After administration of diuretics, the patient‘s condition remains unstable. Due to acute respiratory failure the patient is intubated. Which condition will you suspect?
Select one:

a. Febrile non-haemolytic transfusion reaction
b. TRALI (transfusion-related acute lung injury)
c. Allergic reaction
d. Transfusion-related circulatory overload
e. Transfusion-related sepsis

A 35-year-old man presents to the emergency department with acute heart failure. He has a 2-week history of progressive breathlessness. Past medical history includes type II diabetes mellitus. An echocardiogram subsequently shows an EF of 25% and abnormalities of anterior, septal and lateral wall motion. He is stabilized on treatment with furosemide, spironolactone, bisoprolol and ramipril. What would be your next investigation?
Select one:

a. Exercise ECG
b. Lung function tests
c. Invasive coronary angiogram
d. Viral titres
e. Endomyocardial biopsy

A patient aged 60 years came to a family doctor because of the dryness in the eyes and a lack of tears lasting for a half of year. She also notes that dental caries has worsened significantly in the recent past, sometimes joints (small joint joints, knee joints) are painful. The joints are not swollen. ESR - 50 mm/h; CRP - 15mg/l (normal value < 5mg/l); RF - 100 IU/l (normal value < 15 IU/l); other tests - within the normal limits. What is the most likely disease?
Select one:

a. Sjogren‘s syndrome
b. Rheumatoid arthritis
c. Fibromyalgia
d. Systemic sclerosis
e. Systemic lupus erythematosus

A 60-years-old man presented with a progressing headache, drowsiness, weakness of the left hand. He has a history of lung cancer, operated 2 years ago. MRI – 2 contrast enhancing lesions of the right frontal lobe with a significant perifocal edema. Possible ways of treatment:
Select one or more:

a. Glucocorticosteroids and dehydration
b. Chemotherapy
c. Whole brain radiation
d. Stereotactic radiosurgery
e. Craniotomy, removal of the tumors

A 42-year-old man with chronic stomach ulcer. Suddenly, 4 hours ago heavy after drinking of alcohol with food acute severe abdominal pain occured. Abdomen is painful and distented. Which study will you choose first for differential diagnosis?
Select one:

a. Computer tomography of abdominal organs
b. Ultrasound abdominal examination
c. Radiological examination of the stomach with barium sulphate liquid solution
d. X-ray of the abdominal cavity
e. Ezofagogastroduodenoscopy

A 63-year-old man was discovered to have fasting glucose level of 6.9 mmol/l during prophylactic examination. A few weeks later, an oral glucose tolerance test (OGTT) was performed: fasting blood glucose 7.1 mmol/l, 2 hours after 75 years glucose 11.5 mmol/l. What diagnosis would you make?
Select one:

a. Insulinoma
b. Impaired fasting glucose
c. Impaired glucose tolerance
d. Type 2 diabetes
e. Stress hyperglycemia

51 years old woman was brought to the primary care department due to acute disorientation, sickness, dyspnea at rest. We can see acrocyanosis, all body skin especially of the limbs is thickened, loss of skin wrinkles, reduced oral aperture and deepening of perioral facial folds (radial furrowing), many scars and

few ulcers in the fingertips, the distal phalanxes of the fingers are shorter. Another data: artery blood pressure – 220/125 mmHg, pulse – 120 times per minute, tachipnoe. Chest X-ray showed lung fibrosis. Which of these clinical situations are suitable for this case?
Select one:

a. Nephropathy induced of myolysis, when dermatomyositis is diagnosed
b. ''Scleroderma kidney''( hypertensive crisis due to kidney pathology of systemic sclerosis)
c. Lupus nephritis (induced of systemic lupus erythematosus)
d. Atlanto – axial subluxation when rheumatoid arthritis is diagnosed
e. Cerebral vasculitis when systemic lupus erythematosus is diagnosed (neurolupus)

34-year-old female developed symptoms 8 months after childbirth: tiredness, palpitation, weakness. She was investigated for suspected hyperthyroidism, TSH 7,4 mU/l (0,4-4,0), FT4 11,3 mU/l (9,0-19,0), ATPO >1000 kU/l (<5). Ultrasound examination revealed reduced thyroid echogenicity without nodules. What is the diagnosis?
Select one:

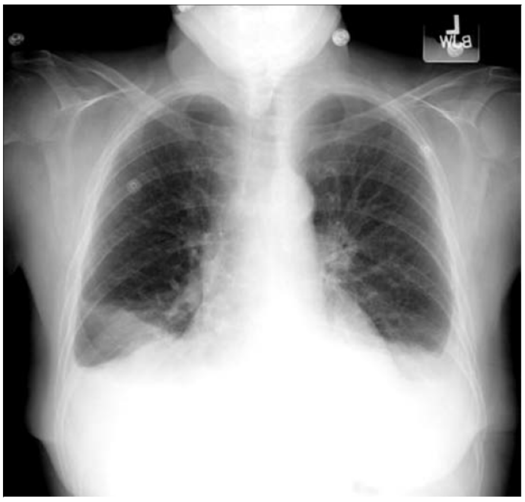
a. Subacute thyroiditis
b. Graves' disease
c. Riedel's thyroiditis
d. Postpartum depression
e. Chronic autoimmune thyroiditis

32 years old male is complaining with the high blood pressure (BP) and muscle weakness. His morning BP at home is up to 150/90 mmHg and evening BP is up to 170/110 mmHg. He does not take any medications for hypertension. Clinical investigations: left ventricle hypertrophy on ECG; biochemistry tests: sodium 142 mmol/l, potasium 3.0 mmol/l, chloride 108 mmol/l. Abdominal ultrasound: right adrenal tumor in suspicion. What is the likely cause of hypertension?
Select one:

a. Pheochromocytoma
b. Primary hyperaldosteronism
c. Stenosis of a. renalis
d. Primary arterial hypertension
e. Cushing syndrome

A 57-year-old woman presents with dyspnoea, ankle oedema, fatigue, and orthopnoea. She has a long history of hypertension and diabetes mellitus with suboptimal control. She does not have angina and is a non-smoker with normal cholesterol levels.
Medications
Metoprolol: 50 mg twice daily
Hydrochlorothiazide: 25 mg once daily

- Vital signs
    - BP: 170/90mmHg
    - HR: 64 bpm, regular
- Physical examination
    - Lungs: clear to auscultation
    - Cardiac: JVP (jugular venous pressure) 12 cm, LV impulse prominent and sustained, +S3, no murmurs
    - Extremities: lower extremity ankle oedema bilaterally
- ECG: regular sinus rhythm, rate 65 bpm.
- Chest radiograph:



The next step in management should include which of the following?
Select one:

a. Coronary angiography
b. ACE inhibitor
c. Digoxin
d. Exercise testing
e. Echocardiography

A 25-year-old male developed sharp local central chest pain and palpitations after drinking three cans of energy drink whilst revising for exams. The symptoms were ongoing when he initially attended the emergency department, and an ECG showed a sinus tachycardia with no ST change. The pain subsided shortly afterwards. His father recently had a myocardial infarction at the age of 62. He is normally fit and well. All observations and examinations are normal. Troponin and D-dimer tests are negative. What would you recommend do to next?
Select one:

a. No further investigations, recommendations for lifestyle correction
b. Stress echocardiogram
c. Admit for observation
d. Exercise treadmill test
e. CT coronary angiogram

The patient has poorly controlled type 1 diabetes for about 20 years. During exercises, he suddenly felt a severe deterioration of vision with one eye. Which one of the following disorders is the patient most likely to have?
Select one:

a. Retinal detachment due to proliferative retinopathy.
b. Stroke.
c. Cataract.
d. Eye macula pathology.
e. Neuropathy.

45 years old woman noticed that her eyelids, neckline and hand knuckles became red. She also started to feel limb weakness one month ago – it is hard to get up from a chair and brush hair without stopping. Which laboratory tests you will make for diagnosis and what disease you will suspect?
Select one:

a. Nailfold capillaroscopy and systemic sclerosis is suspected
b. You will recommend consultation of dermatologist, because psoriasis is suspected

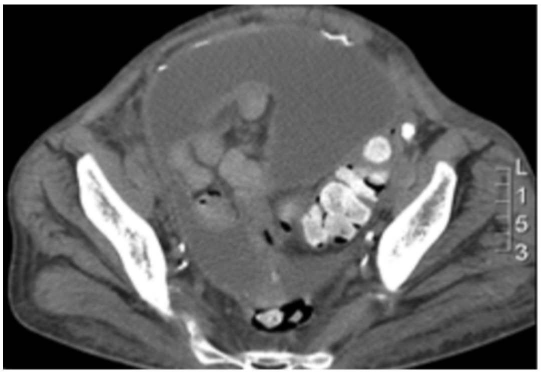
This patient has classic Dermatomyositis: proximal muscle weakness plus a characteristic rash on the eyelids and knuckles.
The diagnosis is supported by elevated muscle enzymes such as CK, AST, ALT, and aldolase.

c. ESR, CRP; it seems to be polymyalgia rheumatica
d. Anti-double stranded DNA and systemic lupus erythematosus is suspected
e. Myolysis markers like alanine aminotransferase ALT, aspartate aminotransferase AST, creatine kinase CK, aldolase and dermatomyositis is suspected

Patient hospitalized to the regional hospital on April 1. Urgent operation (cholecystectomy-gall bladder removal) was performed on April 3. Discharged without symptoms of infection on April 10. He was admitted to the university hospital due to suppuration of the surgical wound on April 15, a microbiological examination of the wound was performed but culture was negative (no bacteria grow). Is patient‘s wound infection nosocomial (healthcare-associated)?

Select one:
a. No, because he was hospitalized in another hospital
b. Yes, because symptoms started within 30 days after surgery
c. No, because the microbiological test is negative
d. No, because the symptoms started more than 48 hours after discharge
e. No, because the operation was urgent

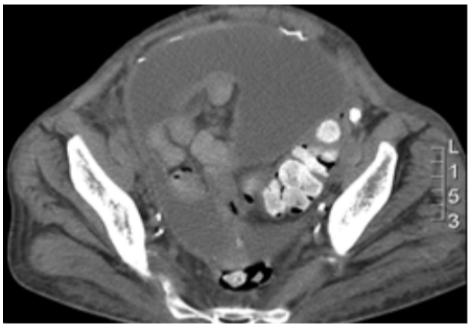
A 60-year-old woman received peritoneal dialysis (PD) for 12 years. Her recent PD regimen is glucose 2,27%. 2000 cc 3 t.i.d. and icodextrin 2000 cc at night. She presents with poor appetite and a weight loss (3 kg in 6 months), abdominal pain. She has low levels of hemoglobin (101g/l) and low serum albumin (20g/l). Abdominal CT shows peritoneal thickening and calcifications, also, bowel loop dilations. What you suspect?



Select one:
a. Acute PD associated peritonitis
b. Encapsulating peritoneal sklerosis

c. Nephrogenic systemic fibrosis
d. Subacute appendicitis
e. Incorrect PD catheter position

A 60-year-old woman who received peritoneal dialysis (PD) for 12 years due to end stage renal disease of hypertensive nephropathy. Her PD regimen was sol. Physioneal 2.27%. 2L 3 t.i.d. and sol. Icodextrini 2L. She presented with poor appetite and a weight loss (3 kg in 6 months), abdominal pain. She had low levels of hemoglobin (101g/l) and serum albumin (20g/l). According to symptoms abdominal CT was performed and disclosed peritoneal thickening and calcifications, also, bowel loop dilations. What complication of peritoneal dialysis could you diagnose?



Select one:

a. Peritonitis
b. Incorrect PD catheter position
c. Appendicitis
d. Nephrogenic systemic fibrosis
e. Encapsulating peritoneal sklerosis

A 65-year-old man presents with unstable angina and an elevated troponin level. Comorbidities include type II diabetes mellitus treated with metformin and essential hypertension treated with metoprolol. Angiography shows three-vessel coronary artery disease (CAD) with three discrete proximal flow limiting lesions and normal left ventricul function. Treatment of choice is:

Select one:

a. Only optimization of medical treatment
b. Multivessel percutaneous coronary intervention (PCI) with stenting starting with the tightest stenosis
c. Multivessel stenting starting with the proximal left anterior descending coronary artery (LAD) stenosis
d. Medical therapy and functional testing to assess the extent of myocardial ischemia
e. Coronary artery bypass grafting including a left internal mammary artery (LIMA) graft

56-year-old female was investigated because of suspected Cushing's syndrome. Laboratory tests revealed increased 24-hour urinary cortisol and increased serum adrenocorticotropic hormone (ACTH) concentration. Which disorder could cause these laboratory abnormalities? Select one:

a. Sellar craniopharyngioma
b. Neuroendocrine tumor secreting gastrin
c. Adrenal carcinoma
d. Adrenal adenoma
e. ACTH-secreting pituitary adenoma

Preventive loop ileostomy was constructed after rectal resection operation. Ileostomy closure operation is planned. The patient is prepared for surgery using: Select one:

a. No need to prepare

b. Polyethylene glycol solution (4 litres of solution is given before surgery)
c. 7-day antibiotic course for the destruction of the patognomic intestinal microflora
d. Cleansing enemas
e. Enteral nutrition mixtures and i/v infusions

75-year-old woman with type 2 diabetes is treated with metformin 850 mg BID and gliclazide 120 mg OD. She arrived to see her family doctor because of episodes of palpitation, tremor, dizziness, weakness, hunger, blurred vision, confusion. These episodes usually are associated with prolonged fasting or physical activity. What condition would you suspect?:
Select one:

a. Paroxysmal tachycardia
b. Transient ischemic attack (TIA)
c. Orthostatic hypotension
d. Unstable angina pectoris
e. Hypoglycemia

Does the 55-years-old woman with present smoking, arterial hypertension, positive family history of coronary artery disease (her mother died at age 47 years from CVD) and dyslipidaemia needs drug treatment for hypercholesterolemia? Her CVD risk according SCORE cardiovascular risk chart is high. Laboratory assessment showed: total cholesterol 8,78 mmol/l, LDL cholesterol 5,86 mmol/l, triglycerides 2,42 mmol/l, HDL cholesterol 1,81 mmol/l, glucose – 4,99 mmol/l.
Select one:

a. No, only lifestyle advice
b. Atorvastatini 10 mg 1 time/d
c. Atorvastatini 40 mg 1 time/d
d. Atorvastatin 5 mg 1 time/d

A 47-year-old female has recurring episodes from the age of 15. During attacks her facial expression suddenly changes; she smacks her lips, and starts to clap rhythmically with her left hand. Episodes last up to 1 min, and she does not remember anything from the episodes. Attack frequency 2-4 times per month. Once in two months episode is followed by loss of consciousness and tonic-clonic seizures. Full recovery comes in 15-20 minutes. According to her family members, episodes are mainly provoked by stress and fatigue. In the childhood she had several prolonged febrile seizures. Neurological examination is normal, there are no changes in the brain computed tomography, and blood tests. The most appropriate treatment would be:

a. Sertraline
b. Carbamazepine. Seizures go BAM !!!
c. Diazepam.
d. Aspirin.
e. Ethosuximide.

A 28-year-old male presents with erythematous itchy, scaly plaques on the groin. Local glucocorticoid ointments were used for treatment and the condition of the skin was significantly improved; the itching disappeared but the rash began to spread. What disease do you suspect?
Select one:

a. Pityriasis rosea

b. Lichen planus
c. Fungal groin infection
d. Psoriasis -
e. Granuloma annulare

3 years old boy, no family history, delayed psychomotor development, tip-toe walking, calf enlargement, serum creatine kinase (CK) 18 000 U/L (ref. 25-199). What is the most probable diagnosis?
Select one:

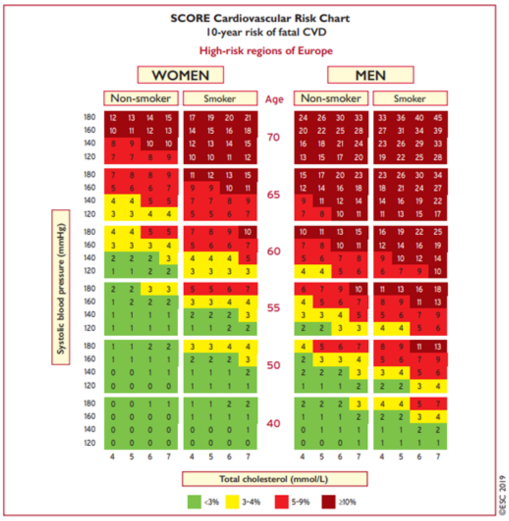
a. Congenital myotonic dystrophy
b. Childhood onset myotonic dystrophy
c. Becker muscular dystrophy
d. Spinal muscular atrophy
e. Duchenne muscular dystrophy

67 years old men was delivered to the emergency department complaining of severe pain in the abdomen and inability to urinate. The patient felt down from 3 meters high and hit his perineum 3 hours ago. Examination: The lower part of the abdomen and perineum is painful during palpation. There is a hematoma in the perineum and blood in the urethra.
Digital rectal examination: prostate non-palpable.
Ultrasonography imaging: normal kidneys, 600 ml of urine in the bladder with no abnormalities in the bladder walls.
Blood analysis: WBC-7.2 $10^9$/l, HgB-105 g/l.
What is correct clinical diagnosis? Select one:

a. Kidney trauma
b. Rupture of the urethra
c. Abscess of the perineum
d. Rupture of the bladder
e. Perforation of the small intestine

A 55-years-old woman was referred to cardiovascular prevention unit due to hypercholesterolemia. The woman is active and asymptomatic concerning coronary heart disease. She has arterial hypertension for 10 years (treated with nebivolol 5 mg 1 time/d and zofenopril 30 mg 1 time/d). She smokes. Her family history is positive (her mother died at age 47 years from CVD).
On physical examination her weight was 73 kg, height 160 cm, waist circumference 93 cm, body mass index was 29.2 kg/m2, HR 78 bpm, BP 183/94 mmHg.

Laboratory assessment showed: total cholesterol 8.78 mmol/l, LDL cholesterol 5.86 mmol/l, triglycerides 2.42 mmol/l, HDL cholesterol 1.81 mmol/l, glucose – 4.99 mmol/l. What is cardiovascular risk category of this female patient (for risk calculation you can use SCORE chart (below) dedicated to countries at high cardiovascular risk)?



Select one:

a. Very high-risk
b. High-risk
c. Low-risk
d. Moderate- risk

A 65-year-old man with a known ascending thoracic aortic aneurysm (5 cm) and a bicuspid aortic valve is being followed on a yearly basis by a referring physician. The most recent transthoracic echocardiography (TTE) shows an increase in the diameter of the aneurysm to 5.8 cm. The patient is referred to you for further evaluation. You want to confirm the results of the echocardiogram. You should consider ordering: Select one:

a. None of the above
b. Any of the above
c. MRI with contrast
d. CT with contrast
e. Transesophageal echocardiography (TEE)

A 34-year-old female comes into hospital via the emergency department, following a prolonged episode of vomiting after a night of binge drinking, at the end of which she noticed some fresh blood in the vomit. She has since stopped vomiting and is feeling a bit better, but she is worried about the blood that she saw. Choose the most appropriate diagnosis: Select one:

a. Acute pancreatitis
b. Hiatus hernia
c. Oesophageal varices
d. Gastroduodenal ulcer -
e. Mallory-Weiss syndrome (tear)

What is this disorder?

The patient has had epilepsy for many years. For him, epileptic seizures recur several times a week. The patient's psyche has deteriorated for many years. He only feels good for about two hours in the morning. He feels sick at about 10 o'clock in the morning: feels tired, has a headache and dizziness, his heart rate increases. After resting for a few hours, the patient's condition improves, and then the illnesses recur. It is very difficult for him to communicate in a large group of people because the surrounding stimuli make him feel unwell. He tried to be treated for alcohol, but felt even worse: he was very intoxicated and often became angry with loved ones. The next day, the patient was very overwhelmed by the conflicts, apologizing to everyone.

Select one:

Organic asthenic disorder is a condition where a person develops persistent mental and physical exhaustion due to an underlying organic/brain-related illness.
Patients often feel chronically tired, mentally slowed, irritable, and unable to tolerate stress or concentration.

a. Dementia
b. Adjustment disorder
c. Mild cognitive impairment
d. Harmful alcohol consumption
e. Organic asthenic disorder

A 25 year-old woman complains of sneezing, nasal congestion, abundant clear nasal discharge, itching of the eyes and redness. Symptoms recur everyday for the third consecutive year in June – July. What disease do you suspect?

Select one:

a. Acute rhinitis.
b. Persistent allergic rhinoconjunctivitis.
c. Episodic allergic rhinitis.
d. Vegener's granulomatosis
e. Nasal septum deviation.

A football player sustains a head injury during a game. On examination he is Glasgow Coma Scale 15. Which one of the following statements about complications following concussion is most accurate?

Select one:

a. The risk of late seizures (post-traumatic epilepsy) in those with mild traumatic brain injury is thought to be threefold higher in the next 5 years.
b. The commonest symptoms of post- concussion syndrome are ongoing cognitive impairment.
c. Chronic traumatic encephalopathy is characterized clinically by neurodegeneration.
d. Second impact syndrome is a common cause of rapid fatal brain swelling after concussion.
e. Dysfunction of cerebral autoregulation after an initial concussion is thought to underlie the risk for second impact syndrome.

after a concussion, the brain temporarily loses normal blood flow autoregulation, making a second head injury potentially catastrophic.

A 66-year-old male with arterial hypertension (ABP 160/100 mmHg, pulse 60 bpm) and hypertensive nephropathy (increased urinary albumin to creatinine ratio, serum creatinine 123 µmol/l). No other cardiovascular disease. Target blood pressure was not reached with lifestyle changes. What combination of medications would you prescribe to this patient?

Select one:

a. Beta adrenoblocker with calcium channel blocker
b. ACEI of ARB with calcium channel blockers
c. ACEI with ARB
d. Beta adrenoblocker with loop diuretic

A person was admitted to the hospital after an assault. Multiple external injuries were observed in various areas of the person‘s body. What information regarding the injuries could be relevant for the forensic investigation?

Select one:

a. all of the mentioned
b. type
c. location

d. colour
e. size and shape

A 25-year-old female has no complaints. Urinalysis revealed proteinuria 0.5 g/l, hematuria 50 mg/l, no leucocytes. Urine microscopy: dysmorphic red blood cells found. ANA, ANCA, anti-ds-DNA antibodies negative, levels of complement component C3 and C4 within normal limits. Serum creatinine 53 µmol/l. Kidney biopsy findings: mesangial hypercellularity and mesangial expansion. What immunofluorescence findings are most likely? Select one:

a. IgA, IgM, IgG, C3, C1q fluorescence
b. Positive IgM fluorescence
c. Anti-GBM fluorescence
d. Positive IgA fluorescence

A 25-year-old patient presented in March. On the first day of the illness, he had fever up to 39.8C, headache. On the second day of the illness, the condition worsened, great general weakness appeared, it was 2 episodes of diarrhea, pain in the limbs, numbness. Upon arrival at the reception department, Pale skin, cyanosis of fingers and toes, several small spots on the chest area were observed at the emergency department. Blood pressure 80/50, heart rate 120 k/min, saturation 92 %. Laboratoty findings: moderate neutrophilic leukocytosis, platelets 40, CRB 50mg/l. What disease can be suspected and what should be the doctor's tactics?
Select one:

a. Severe Influenza. Severe dehydration due to fever. Take a nasopharyngeal swab to detect influenza virus. Oseltamivir, IV fluids
b. Meningococcal infection. Meningococcal sepsis. Septic shock. Take a blood culture, prescribe an intravenous antibiotic effective against N. meningitidis as soon as possible, hospitalize in the intensive care unit
c. COVID-19 disease. Nasopharyngeal swab, oxygen through face mask, chest x-ray
d. Pancreatitis. Abdominal CT, consultation of the surgeon
e. Bacterial intestinal infection, hypovolemic shock. Take stool cultures, IV fluids

43-year-old white female was involved in a motor vehicle accident 6 months ago. She developed severe neck and low back pain with initial diagnosis of cervical and lumbar sprain/strain. The pain was persistent despite analgesics and muscle relaxants. She had x-rays and magnetic resonance images (MRIs), which showed some cervical disk disease without neuroforaminal encroachment and lumbar disk disease. The patient also complains of fatigue, disturbed sleep (she could fall asleep but tossed and turned with frequent awakenings due to pain and woke up tired in the morning), depressive mood, anxiety, memory issues. Her exams showed decreased range of motion of the neck and low back. What are your next actions? Select one:

a. Refer the patient to Emergency department for hospitalisation.
b. Check 18 tender points characteristic for fibromyalgia
c. Order new spinal radiographs

d. Order a thorough examination for oncologic disease
e. Without any further testing, prescribe opioid analgesics.

71 years old woman started to feel pain in the right temporal area. This pain strengthens with chewing. noticed tortuous blood vessel in this The patient loss of vision area. Finally, in the same side eye have occurred. The patient felt shoulder and pain on both sides before one week, hip which limited her movements. Which rheumatological disease you will suspect?
Select one:

a. Fibromyalgia
b. Polymyalgia rheumatica with temporal arteritis
c. Ankylosing spondylitis
d. Gout
e. Generalized osteoarthritis

What is this disorder?
The patient was admitted to the trauma department due to an open fracture of the tibia. In the reception room, the patient stated that he only consumes alcohol during the holidays. Relatives of the patient learned that the patient had recently been fired due to alcohol consumption. On the third night of hospitalization, the patient could not fall asleep, was anxious, tense, tried to run away from the ward, said that the devils were walking on the windowsill, spoken correctly saying his name, but could not indicate where he is at the moment. During the day the above symptoms disappeared but recurred the next night.
Select one:

a. Organic hallucinosis
b. Alcohol psychotic disorder, predominantly delusional
c. Delusional disorder
d. Alcohol withdrawal state with delirium
e. Organic delusional disorder

55 years old patient suffers from exertion dyspnoe, orthopnoe, sometimes has On haemoptysis. physical examination: hoarseness of voice, malar flush, loud first sound, rumbling, low-pitched, mid-diastolic murmur. What could be the ECG findings?
Select one or more:

a. High P wave (P pulmonale)
b. Right atrial enlargement
c. Right ventricle hypertrophy
d. Broad bifid P wave (P mitrale)
e. Left atrial enlargement

Patient was diagnosed with myeloma. Current urine test shows proteinuria, creatinine level in blood 300 umol/l. Which change is less likely in kidney biopsy? Select one:

a. Renal tubular cell casts
b. Positive immunohistochemical reaction to AA amyloid
c. Positive staining with Congo red
d. Tubular atrophy and interstitial fibrosis
e. Positive immunohistochemical reaction to AL amyloid

A 45-year old asymptomatic lady had an elective echocardiography which demonstrated Bicuspid Aortic Valve. Her past medical history is significant of diabetes and high blood pressure. Which strategies are the most relevant in her case?
Select one or more:

a. Bicuspid Aortic Valve is an anatomical variation. Neither follow up nor further investigations are required
b. Bicuspid Aortic Valve has been proved to calcify and degenerate quicker, therefore this patient should remain under Cardiology scope and a regular follow up with echocardiogram
c. Bicuspid Aortic Valve is extremely vulnerable to shear forces and may rupture at any time. An urgent Aortic Valve Replacement is recommended
d. Bicuspid Aortic Valve is unique in structure and not susceptible for valvar disorders, therefore no treatment is required
e. In case of Bicuspid Aortic Valve, an Ascending Aortic Aneurysm is likely to develop, therefore this patient must have regular follow up with Echocardiography scan to assess the valve. With time, she is likely to need a composite of Ascending Aorta and Aortic Valve Replacement

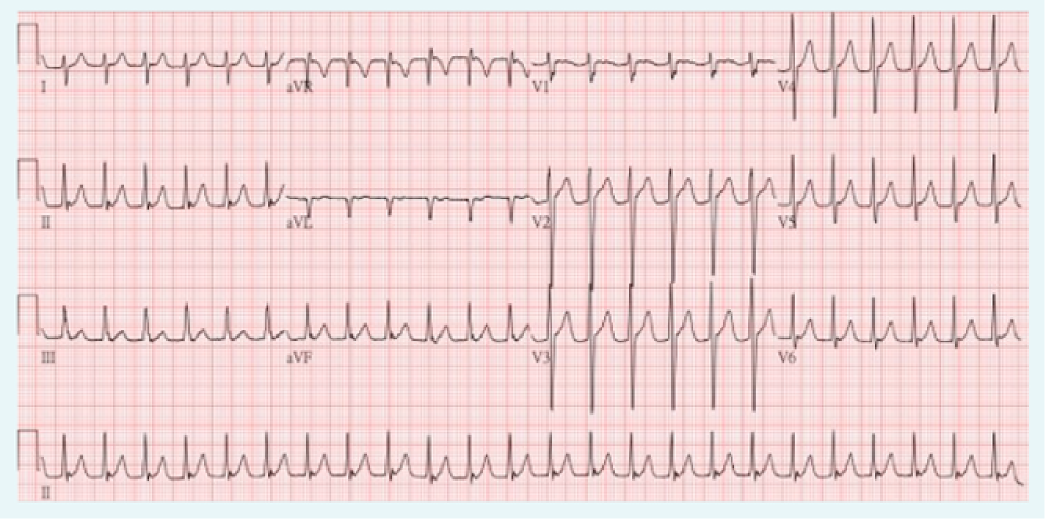
A 37-year-old man went to see his family doctor because of thirst, polydipsia, polyuria. These symptoms started 2 months ago, during which time the patient lost 5 kg of weight.
Comorbidities: primary arterial hypertension.
Concomitant medications: perindopril/indapamide 5/1.25 mg x 1.
Family history of diabetes positive - the patient's mother has type 2 CD.
Physical examination - weight 94 kg, height 172 cm, BMI 31.8 kg/m2, BP 142/94 mmHg, HR 86 beats/min. The tongue is dry, the smell of acetone absent. Skin turgor is good. Thyroid gland is not enlarged on palpation, no nodules. Other systems - without abnormalities.
Blood tests were performed: plasma glucose 16.7 mmol/l; the test repeated next day - 25.3 mmol/l.
What test would you perform to determine the type of diabetes? Select one:

a. Plasma C-peptide level
b. Glycosylated haemoglobin (HbA1C).
c. Antibodies against glutamic acid decarboxylase (anti-GAD) level
d. Oral glucose tolerance test
e. Plasma insulin level

42 years old woman suffers from hair loss and fatigue. Biochemical analyses show TSH 7,4 mIU/l (normal value is up to 4.0 mIU/l), and FT3 and FT4 within normal limits. What pathology would you suspect?
Select one:

a. Hyperthyroidism
b. Subclinical hypothyroidism
c. Subclinical hyperthyroidism
d. Hypothyroidism
e. Euthyroidism

A 36-year-old white female nurse comes to the emergency department due to a sensation of fast heart rate, slight dizziness, and vague chest fullness. Blood pressure is 110/70. The following rhythm strip is obtained, which shows: Select one:



a. Atrial flutter
b. Supraventricular tachycardia
c. Ventricular tachycardia
d. Ventricular fibrillation
e. Atrial fibrillation

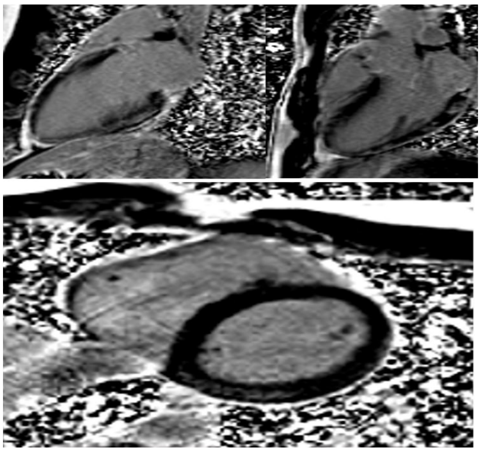
A 43-year-old woman had acute onset of shortness of breath, fever and light-headedness. She had a history of rheumatic fever and subsequent surgical mitral valve replacement. On physical examination, she was pale and tachypnoeic. HR was 95 bpm and regular, with a low-volume pulse. BP was 95/44 mmHg. There were bilateral pulmonary rales with associated lower extremity oedema and elevated JVP. A new murmur was present. The next step in your evaluation should be:
Select one:
a. Cardiac CT
b. Cardiac catheterization
c. Transoesophageal echocardiography
d. None of the above
e. Transthoracic echocardiography

A 65-year-old male presents with right upper quadrant abdominal pain. His physical examination shows a soft abdomen with no guarding, good bowel sounds and no masses but a positive right upper quadrant tenderness. A computed tomography scan of the abdomen shows gallstones. This patient has had numerous prior surgeries and the plan is to proceed with open cholecystectomy. What is the most appropriate incision to afford good exposure for this surgery? Select one:
a. Midline
b. Kocher
c. Pfannenstiel
d. Chevron

Parents with a 5-year-old boy visited the general practitioner. They are worried about the boy's heavy breathing which started 2 days ago. The condition of the child: T 38,9$^{0}$C, the skin is grayish, the throat is red, respiratory muscles are participating in breathing process, the breathing rate is 50 times / min, crepitations is heard on inspiration during auscultation of the chest. Lab. test: CRP 80 mg / L, Blood test - WBC 20,0 (* 109 / l). This condition appears for the first time in his life. What is most likely diagnosis based on your knowledge? Select one:

a. Asthma.
b. Epiglotitis.
c. Pneumonia.
d. Acute bronchitis.
e. Bronchiolitis.

You are asked to review a 22-year-old smoker in the emergency department. He has presented with ongoing chest pain for an hour. The pain is described as left-sided and sharp but not focal. There is no postural pain change and no pain change with inspiration. He appears clinically well. The emergency team are concerned because patient has anterior ST elevation on ECG.
Echocardiography of the patient shows slightly diminished left ventricular ejection fraction around 50% with hypokinesis in lateral wall and traces of fluid in pericardial space. Laboratory tests showes both CRP and troponin I elevation. His cardiovascular magnetic resonance (CMR) images (late gadolinium enhancement images) are presented below.



What is the most likely diagnosis of this patient? Select one:

a. Acute perimyocarditis
b. Acute anterolateral myocardial infarction without ST segment elevation
c. Unstable angina
d. Acute anterolateral myocardial infarction with ST segment elevation
e. Diagnosis is unclear – additional information is needed

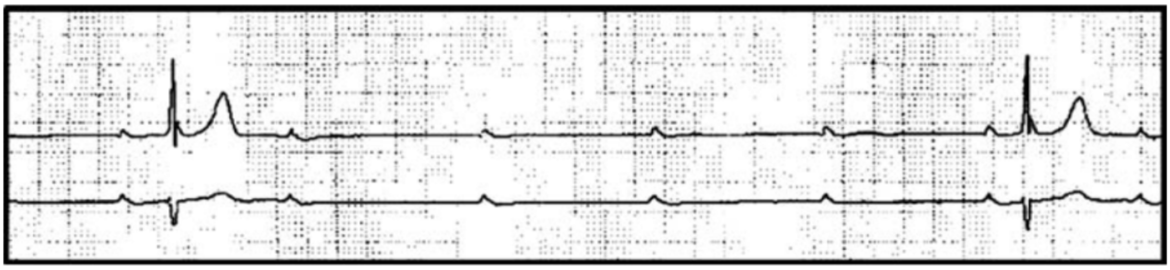
In July 20-year-old patient arrived at the Emergency Department on the second day of his illness because of fever, headache, muscle pain, nausea. He did not go abroad before. He did not notice any tick bite. He has fever for 3 days 2 weeks ago. In the examination: he was conscious, there were no meningeal and focal neurological symptoms. Common haematological blood test revealed neutrophilic leukocytosis (WBC - 12 x 109/l), CRB 24 mg/l. Head CT scan without pathology. What should be the doctor's tactic? Select one:

a. Hospitalize the patient, prescribe non-steroidal anti-inflammatory drugs and intravenous fluids infusion, antibacterial treatment
b. Hospitalize the patient, perform lumbar puncture, obtain CSF for analyses and blood samples for the detection of Tick born encephalitis (TBE IgM and TBE IgG) antibodies, prescribe symptomatic treatment
c. Hospitalize the patient with suspected sepsis. Take blood sample for blood cultures and administer parenteral antibacterial treatment
d. Discharge the patient home because there is no evidence of neuroinfection
e. Discharge the patient home with prescribed antibacterial treatment

Patient is diagnosed with atrial fibrillation recently and has high cardiovascular disease (especially stroke) risk. What is the most appropriate drug to be prescribed for stroke prevention?

a. Alteplase
b. Tranexamic acid
c. Apixaban
d. Aspirin
e. Clopidogrel

A 17-year-old female presents for a routine gynaecologic appointment. She reports no complaints. She has no known medical history other than a “low heart rate” shortly after she was born. She is not using any medications and denies illicit drug use. Her examination was within normal limits with exception of a low pulse rate at 36 bpm. An echocardiogram was normal.
The following rhythm strip was recorded during 24 hours ECG monitoring. Patient reported dizziness and near syncope in his diary.



What is the next step in the care of this patient? Select one:

a. Implantable cardioverter defibrillator (ICD)
b. Implantable loop recorder
c. Reassurance and return in 6 months for repeat 24 hours ECG monitoring and clinical evaluation
d. Dual-chamber permanent pacemaker implantation
e. Single-chamber permanent pacemaker implantation

In 2020, 57-year-old Alain Cocq, who suffered from a rare incurable degenerative disease for 34 years and was in great pain, addressed the French President E. Macron asking for permission to die "with dignity". The patient asked either to allow his physicians to inject him with a lethal drug or to prescribe the medicine which would be administered by himself. E. Macron replied that he was "moved" by the letter, but could not grant the request for euthanasia as it is prohibited in France. Thus A. Cocq decided to refuse food, drink and medicine. What end-of-life decisions are described in the A. Cocq request to the French President: Select one:

a. Euthanasia and assisted suicide

b. Assisted-suicide
c. Suicide, euthanasia, assisted suicide
d. Suicide
e. Euthanasia

A 60-year-old woman is brought to the Emergency Department complaining of chills, fever up to 40°C, vomiting, headache, disorientation, right calf pain. The patient states that she fell ill two days ago when the body temperature increased. Today she noticed redness in the calf region. 5 days ago, she injured her right foot while working in the garden. Claims to have type 2 diabetes, consistently takes medication. Physical examination: body temperature - 39.5°C; conscious, oriented; meningeal symptoms are negative, there is no focal neurological symptoms. Pharynx not flushed. Right calf is reddened, swollen, pronounced skin hyperemia, redness' lines are very clear, edges slightly raised above healthy skin. Which disease is this women sick with? How would you treat it?
Select one or more:

a. Patient has erysipelas. I will treat her with cefazolin and vaccinate with diphtheria/tetanus vaccine Imovax dT
b. Patient has anthrax. I will treat her with penicillin
c. Patient has pneumonia. I will treat her with amoxicillin
d. Patient has erysipelas. I will prescribe her penicillin and vaccinate with diphtheria/tetanus vaccine Imovax dT
e. Patient has sepsis. I will treat her with the broad spectrum antibiotics

Patient's complaints are progressive gait disturbances, related to insufficient coordination, poor sight, inarticulate speech, recurring respiratory tract infections. Upon examination, all of the above mentioned symptoms were present, as well as amymic facial expression and visible blood vessels in the eye. Increased concentration of alpha fetoprotein *(AFP – 150 kU/l)* was detected, brain MRI showed possible signs of cerebellar atrophy. Which one of the following diagnoses is the most likely?
Select one:

a. Huntington disease
b. Neurofibromatosis, type II;
c. Ataxia telangiectasia syndrome
d. Congenital myotonia
e. Tyrosinaemia

Which diagnostic investigations/results could confirm diagnosis of multiple sclerosis?
Selct one or more:

a. evoked potentials – decreased conduction of central in somatosensory evoked potentials
b. lumbar puncture, cerebral fluid results – leucocytes less than 10/$mm^3$, positive oligoclonal bands, elevation of IgG index
c. brain CT – acute ischemic zones in both middle cerebral artery regions
d. lumbar puncture, cerebral fluid results – leucocytes more than 3000/$mm^3$, total protein elevation > 2.0 g
e. brain MRI – demyelinated lesions in white matter of the brain, corpus callosum, cerebellum and brainstem

MS primarily affects:
CNS myelin
It does NOT typically cause major abnormalities in the CBC.

65 years old man was travelling in India. One week after his return, he got sick: he had a sore throat, his temperature elevated up to 38ºC. The next day his temperature was 39ºC, he had a headache, the pain or the throat worsened. He came to the doctor, who observed a thick membrane covering tonsils, spreading from the tonsils to the uvula. Removal of the membrane revealed a bleeding, edematous mucosa. The massive swelling of the tonsils, uvula, cervical lymph nodes, submandibular region, and anterior neck was present. The man had no vaccination for the last 10 years. The blood analyses were: WBC 12 x $10^9$/l, Hb 120

g/l, PLT 100 x $10^9$/l, CRB 100 mg/l. The gram-positive rodes were identified by microscopy of material from beneath the membrane. What disease/form of disease do You suspect?
Select one:

a. Paratonsillar abscess
b. Tonsillar diphtheria
c. Toxic (malignant) diphtheria
d. Streptococcal tonsillitis
e. Infectious mononucleosis

A 75-year-old lady was admitted to emergency department because of acute impairment of vision. It occurred suddenly 2 hours ago. On neurological examination right homonymic hemianopsia was found. Non-contrast brain CT was normal. What diagnosis is most probable?

a. Left cerebellar acute ischemic stroke.
b. Occlusion of right retinal artery.
c. Left posterior cerebral artery acute ischemic stroke.
d. Right posterior cerebral artery acute ischemic stroke.
e. Right middle artery acute ischemic stroke.

32 year-old woman was admitted to the hospital due to headache. 32 weeks of gestation, first pregnancy, the headache started 4 hours ago, she had taken a tablet of paracetamol 3 hours ago. Last time she went urinate 6 hours ago. Maternal examination – pulse 90 bpm, BP 160/110 mmHg, peripheral edema. The fundus of the uterus 25 cm, fetal lie – longitudinal, vertex presentation. Vaginal examination – vaginal discharges normal, cervix external os closed. Ultrasound examination – estimated fetal weight – 850 g (less 5 percentile for gestational age), amniotic fluid index normal, cervical length – 30 mm. NST – reactive. How should she be managed?
Select one or more:

a. Urine analyses
b. Urine output measurement (A Foley catheter)
c. Antihypertensive drugs
d. Admission to the hospital, maternal and fetal monitoring
e. Blood analyses

Patient is diagnosed with severe chronic obstructive pulmonary disease. After a common cold cough and dyspnea got worse, drowsiness and cyanosis appeared. Arterial blood gas analysis: pH 6,9; PaO2 30mmHg, PaCO2 90mmHg. Breathing is shallow, respiratory rate 40/min. How will you treat the patient? Which statement is correct? Single choice:

a. Extracorporeal membrane oxygenation, oxygen therapy, bronchodilators.
b. Oxygen therapy, diuretics, bronchodilators.
c. Intubation and mechanical ventilation, bronchodilators.
d. Oxygen therapy, bronchodilators, antibiotics.
e. Oxygen therapy, oral glucocorticosteroids, bronchodilators.

A 21-year-old man began to complain about back pain and numbness in his feet 10 days ago, 4 days later he noticed weakness in legs. 3 weeks ago he had symptoms of cold. On admission the strength in proximal muscles of legs and arms was scored by 3 out of 5, in distal muscles - 4 out of 5. He had impaired sense of pain and vibration sensation in the distal parts of the limbs. Deep tendon reflex were unobtainable in arms and legs. The nerve conduction studies identified the demyelinization of motor and sensory fibers.

Diagnosis of acute inflammatory demyelinating polyneuropathy (Guillain-Barre syndrome) was made. What would be the most appropriate treatment?

a. Cyclophosphamide.
b. Albumin infusion.
c. Intravenous mannitol infusions.
d. Corticosteroids.
e. Plasma exchange

Your patient has terminal cancer with a life expectancy of less than 3 months. You are managing her chronic cancer pain with morphine sulfate. She has been stable for weeks, but is requiring increasing amounts of opiates to maintain pain control. Which of the following statements is true regarding this situation?

a. The patient is developing tolerance and you should increase her medication
b. The patient is developing tolerance and you should maintain the dosage of medication to avoid dependence
c. The patient's disease is progressing and you should increase her medication dosage
d. The patient is developing tolerance and you should slowly withdraw medication
e. The patient's disease is progressing and you should change medications

A 45-year-old woman with unexpected big weight loss, loss of appetite and shortness of breath was hospitalized. On examination, there is dullness to percussion in the right lung. The aspirate samples of pleural effusion reveal protein ratio >0.57 and LDH ration>0.9, pleural fluid LDH 599U/l (according Light's criteria). From the list below, select the possible CAUSES of such findings in aspirate: Select one or more:

a. Bacterial pneumonia
b. Bronchiogenic carcinoma
c. Nephrotic syndrome
d. Empiema
e. Cardiac failure

A 65-year-old diabetic man with a previous history of myocardial infarction 3 years ago (no intervention required) is found to have atrial fibrillation. His left ventricular ejection fraction is 55% and he has no cardiovascular symptoms. His CHA2DS2-VASc score is 3. What two best thromboprophylaxis options would you advise to him?
Select one:

a. Aspirin and clopidogrel
b. Clopidogrel
c. There is no need for thromboprophylaxis
d. non-vitamin K oral anticoagulants (NOACs)
e. High-dose aspirin

A patient was admitted to the intensive care unit following laparotomy and hemicolectomy after large bowel perforation and peritonitis. Hypovolemia was successfully corrected with infusion therapy in the operating room and intensive care unit but arterial hypotension (82/64 mmHg) and sinus tachycardia (136 k/min) persisted, CVP 12 mmHg. Blood test analysis found severe anaemia (haemoglobin – 78 g/l). What therapeutic intervention is needed to manage arterial hypotension?

a. Norepinephrine infusion
b. Crystolloids infusion (30 ml/kg)
c. Red blood cells (0 Rh minus) transfusion
d. Metaprolol intravenously
e. Dopamine infusion

The initial treatment for a patient with cardiac arrest caused by systemic local anesthetic toxicity is:

a. Urgent cardioversion, dantrolene IV
b. Cardiopulmonary resuscitation, Intralipid 20 % (lipid emulsion) bolus and infusion
c. Amiodarone 300 mg IV, adrenaline 1 mg IV
d. Cardiopulmonary resuscitation, propofol 2 mg/kg bolus
e. Cardiopulmonary resuscitation, Glucose 10 % infusion

21-year-old female is treated for type 1 diabetes for 10 years. She came to see the doctor because of increased pulse, weight loss, sweating, heat intolerance, eye discomfort, excess tearing, left eye enlargement. Physical examination: no signs of dehydration. Skin is moist and soft. Thyroid mildly enlarged, firm. Pulse 96 beats/min BP 130/60 mmHg. Scleral injection and chemosis is seen as well as left eye proptosis. Eye movements - normal. What condition would you suspect?
a. Glaucoma
b. Graves' disease
c. Diabetic autonomous neuropathy
d. Diabetic retinopathy
e. Diabetic ketoacidosis

A 37 year old lady presents with intermittent right upper quadrant. On examination: heart rate 100 beats per minute, blood pressure 160/85 mmHg, temp 36,5° C. The pain started after a heavy meal and became worse overnight. It fluctuates, but does not radiate. She is nauseous but has not vomited. She has had an episode previously on holiday in Greece but this is much worse. The pain settles with analgesia. The following liver function tests (LFTs): ALT 13 UI/L; ALP 233 UI/L; Bilirubin 38 umol/L; Albumin 40 g/L. What are the possible patterns of these LFTs? Select one or more:
a. Obstructive
b. Infective
c. Hepatitic
d. Haemolytic
e. Cholestatic

A 52-year-old woman went to her general practitioner after trauma. One week ago when woman was walking along icy sidewalk she fell and hit her arm. Woman went to emergency room after pain in the arm increased and swelling occurred. A left radius distal fracture without dislocation was confirmed by X-ray. A casket was put on for 4 weeks. It was recommended to repeat X-ray after 7 to10 days. At this moment woman does not have any complaints.
What additional tests would you recommend for this patient?
a. Bone mineral density measurement
b. Urine analysis
c. Complete blood count
d. Internal organ ultrasound
e. Computer tomography of brain

A 63-year-old woman is admitted to the hospital with severe abdominal pain of 3-hour duration. Abdominal examination reveals board-like rigidity, guarding, and rebound tenderness. Her blood pressure is 90/50 mm Hg, pulse 110 bpm (beats per minute), and respiratory rate is 30 breaths per minute. After a thorough history and physical, and initiation of fluid resuscitation, what diagnostic study should be performed:
Select one:
a. Computerized axial tomography (CAT) scan of the abdomen
b. Supine abdominal x-rays
c. Upright chest x-ray
d. Abdominal sonogram

e. Gastrograffin swallow

46 years old woman refers to the cardioologist due to increased blood pressure, irregular heartbeat. 24 hour blood pressure monitoring was performed: average BP during day 175/120 mmHg, during night AKS 180/115 mmHg, average hear rate 88 bpm. Examination: full blood count – without changes; kidney function: GFR - 75 ml/min, Potassium - 3,2 mmol/l. Abdominal ultrasonography: in the right adrenal gland 20*13 mm size tumour. What condition do you suspect and what tests will you perform? Select one:

A. Primary aldosteronism, aldosterone/renin ratio in the blood or urine.
B. Benign adrenal gland tumour, correct hypokalemia, no further examination is required.
C. Adrenal gland cancer, ACTH concentration in the blood.
D. Pheochromocytoma, fractionated methanephrines in the blood or urine.
E. Secondary aldosteronism, abdominal CT angiography.

A 35 year old obese man presents to emergency department with epigastric pain radiating to the back and lower abdomen, nausea and vomiting. Physical examination shows abdominal tenderness, distention, guarding, unstable blood pressure averaging 135/80 mmHg, tachycardia, and temperature of 37.8°C. Which one of the following statements is true concerning the laboratory diagnosis of this patient with acute pancreatitis?

Select one:

a. Lipase is more specific than amylase for acute pancreatitis.
b. A glucose level of 3.3 mmol/L indicates a poor prognosis
c. Amylase is released earlier than lipase and therefore is more sensitive for acute panreatitits.
d. Hypertriglyceridemia is an early sign of acute pancreatitis.
e. Elastase assays are commonly used to rule out acute pancreatitis.

You manage a 28 years old female patient with Marfan syndrome. Her blood pressure is normal (below 130/80 mmHg), she is in sinus rhythm with HR around 65 bpm. On TTE her ascending aorta is dilated up to 46 mm with only mild aortic regurgitation. Patient has desire for pregnancy. What are your suggestions for further management of this young woman?

Select one:

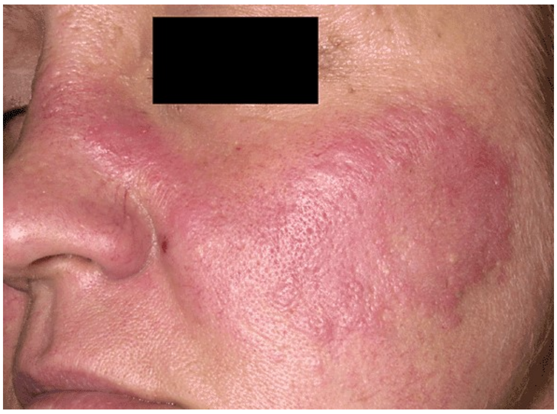
a. to schedule for transoesophageal echocardiography
b. to schedule for computed tomography aortography and in case of aortic dilatation ≥45 mm suggest surgical treatment before pregnancy
c. to schedule for computed tomography aortography and in case of aortic dilatation ≥45 mm suggest surgical treatment after pregnancy
d. to give beta-blocker and losartan only
e. to reassure her and schedule for follow-up

5-year-old female patient came with her mother. The mother noticed that a few weeks ago pink lesions began to appear on the skin of her daughter's abdomen and forearms, which she sometimes scratches and when pressed, she sometimes manages to squeeze out white "cheesy" masses. Objectively, single papules of 2-3 mm diameter with a depression in the center are visible on the skin of the patient's abdomen and forearms. What is the diagnosis of this patient?

a. Atopic dermatitis
b. Viral warts
c. Molluscum contagiosum
d. Insect bites

e. Impetigo

40-year-old male with one month history of symmetrical erythematous, slightly scaly indurated rough plaques on sun-exposed malar and nose areas. No fever, muscular pain or arthralgies; no any systemic or serologic abnormalities, antinuclear antibodies are negative. What is the diagnosis?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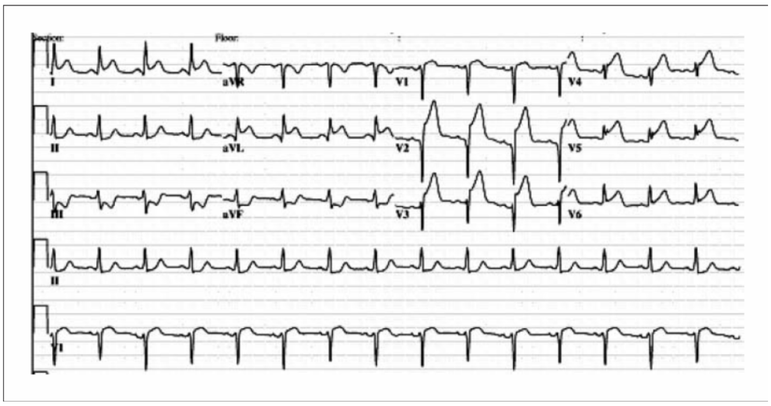
Select one:
- a. Photo-dermatitis
- b. Rosacea
- c. Discoid Lupus Erythematosus
- d. Erysipelas
- e. Contact dermatitis

What is this disorder?
The patient is 30 years old. She has been feeling pessimistic since the age of 20. The patient almost constantly feels diminished interests, diminished cravings. She continues her work activities, social connections. It requires more force, sometimes causing suffering. She took sedatives, antidepressants, attended psychotherapy. The effect is partial. There have been no episodes of well-being in 10 years.
Single choice:
- a. Schizoid personality disorder
- b. Dysthymia chronic, mild form of depression
- c. Social phobia
- d. Paranoid schizophrenia
- e. Moderate depressive episode

A 74-year-old man was admitted to the emergency department because of chest pain that started 1 hr ago. He is now pain free, following morphine that was administered in the ambulance. He had a right-sided cardioembolic stroke 3 yrs ago and has minimal residual left arm weakness. ECG was performed.The next best step for management would be:



Select one:
- a. Emergency cardiac catheterization

b. Urgent cardiac catheterization only if pain returns
c. Echocardiography
d. Pericardiocentesis
e. Thrombolytic therapy
f. Indomethacin

A 42-year-old female presents to emergency department with constant right upper quadrant pain for the past 24 hours. She has had previous episodes of similar pain that tend to come on after eating fatty foods but usually only last a few hours. She is nauseated and is tender in the right upper quadrant with positive Murphy's sign. Her liver function tests (LFTs) are normal. Her temperature is 38.4° C and her neutrophil count is elevated. Which is the most likely diagnosis?
Select one:

a. Acute cholangitis
b. Acute cholecystitis
c. Ruptured hepatic adenoma
d. Acute hepatitis
e. Carcinoma of gallbladder

Jonas was invited to participate in an 8-weeks clinical trial. He signed a written consent to participate in the trial. Can Jonas withdraw from the trial during the 4th week without giving any explanation to the investigator?
Select one:

a. Yes, he can, but he must inform the investigator first and get his/her permission
b. Yes, he can, if the research results have not yet been published
c. No, he cannot
d. Yes, he can
e. Yes, he can, if this condition was included in the consent to participate in the trial form

A patient was admitted to the emergency room with the tension pneumothorax. What should be the immediate management of the patient? Select one:

a. Rigid bronchoscopy
b. Emergency thoracotomy
c. Collar mediastinoscopy
d. Tracheal intubation and artificial ventilation
e. Emergency pleural drainage (chest tube insertion)

A 57-year-old male attends the clinic with a 2-month history of bright red rectal bleeding that occurs with defecation. He denies change in bowel habit. On further questioning he has increasing fatigue and weigh loss over recent weeks. What diagnostic study should be performed: Select one:

a. Oesophagogastroduodenoscopy (OGD)
b. Colonoscopy
c. Abdominal sonogram
d. Upright chest x-ray with gastrograffin swallow
e. Computerized axial tomography (CAT) scan of the abdomen with angiography

A 86 years old woman admitted in A&E with right hip pain, fatigue and breathlessness. Present history: right hip pain since morning. Patient lives with son. After work son found her in bed unable to get up because of pain. In this morning patient felt breathlessness and she tripped while she was going to open a window. Since thesn right hip pain started. Past history: Alzheimer's disease with maximum need of assistance in all needs. At night time patient is fuzzy and shouting for different people. Drug history: Tab. Haloperidoli 1,5 mg once before night time. Any of other medical problems. Clinical examination: conscious, alert and disorientated in time, place and herself. Responsive to simple questions and capable to perform easy tasks. Asthenic body type. Heart sounds normal, no arrhythmia. Pulse 90 bpm and blood pressure 90/60 mm Hg. Pulmonary congestion in the inferior lobes of lungs. Right leg is rotated outside. Right hip movements and palpitation is painful. Further investigation plan is? Select one:

a. Nutritional status assessment, gait assessment, physiotherapist consultation
b. Heart ultrasound; cardiologist consultation
c. Psychiatrist consultation, MMSE and neurologist consultation
d. Lumbar magnetic resonance tomography, lumbar puncture
e. Right hip X-ray, traumatologist consultation

Does the 55-years-old woman with present smoking, arterial hypertension, positive family history of coronary artery disease (her mother died at age 47 years from CVD) and dyslipidaemia needs drug treatment for hypercholesterolemia? Her CVD risk according SCORE cardiovascular risk chart is high. Laboratory assessment showed: total cholesterol 8,78 mmol/l, LDL cholesterol 5,86 mmol/l, triglycerides 2,42 mmol/l, HDL cholesterol 1,81 mmol/l, glucose – 4,99 mmol/l.
Select one:

A. No, only lifestyle advice
B. Atorvastatini 10 mg 1 time/d
C. Atorvastatin 5 mg 1 time/d
D. Atorvastatini 40 mg 1 time/d

A 30-year-old woman complains of abnormal vaginal discharge. During the gynecologic examination, the noted changes were as follows: abundant, yellowish-green, frothy discharge, and „a strawberry cervix“. What is the clinical diagnosis? Select one:

a. Bacterial vaginosis
b. Gonorrhea
c. Trichomoniasis
d. Chlamydia trachomatis infection
e. Vaginal candidiasis

46-year-old female was complaining of discomfort in the neck, increased neck circumference. Thyroid ultrasound revealed 23 mm hypoechogenic thyroid nodule with microcalcifications and enlarged cervical lymph nodes. Thyroid-stimulating hormone (TSH) and free thyroxine (FT4) levels were within normal ranges. What would be the appropriate next step to evaluate this thyroid nodule?

a. Fine-needle aspiration biopsy and cytologic examination
b. Neck magnetic resonance tomography (MRI)
c. Additional tests are not required at this point - thyroid ultrasound should be repeated in one year to see if the nodule is changing
d. Surgical removal of the nodule and histologic examination
e. Neck computer tomography (CT)

29 year old woman is followed up by her physician due to celiac disease. She noted that she is trying to get pregnant. The patient had had both folic acid and ferrum deficiency in the past. Now her complete blood count is normal. What will you recommend when trying to get pregnant: Select one:

a. Folic acid supplements
b. Vitamin B12 supplements
c. No additional supplements
d. Ferrum sulphate supplements
e. Vitamin B6 supplements

A 40-year-old male presents to the office with a history of palpitations that last for a few seconds and occur two or three times a week. There are no other symptoms. ECG shows a rare single unifocal premature ventricular contraction (PVC). Subsequent 24-h ECG monitoring confirms occasional single unifocal PVCs plus occasional premature atrial contractions (PACs). The best antiarrhythmic management in this case is: Select one:

a. Anxiolytics
b. Quinidine
c. Beta blocker therapy
d. Observation, no medication
e. Digoxin

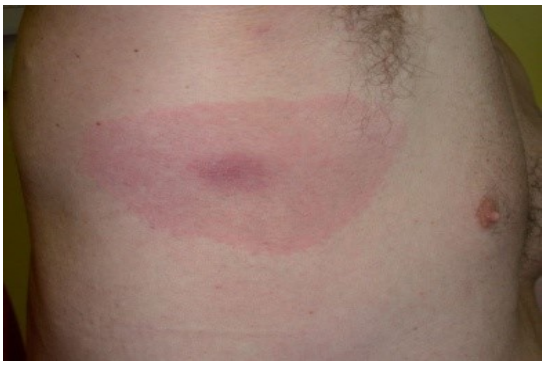
A 35-year-old woman was experiencing general weakness, subfebrile fever, palpitations, neck pain. Symptoms of mild hyperthyroidism, a diffusely enlarged, stiff and very painful thyroid gland were detected during her clinical examination. Preliminary diagnosis - subacute thyroiditis. Which of the following tests would support this diagnosis? Select one:

a. Non-homogeneous appearance of the thyroid gland during thyroid ultrasound
b. Increased level of antibodies against thyroid peroxidase (ATPO)
c. Increased erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP), increased free thyroxin (FT4) and decreased thyroid-stimulating hormone (TSH)
d. Neutrophilic leucocytosis
e. Increased level of antibodies against TSH receptor

A 24-year-old female was hospitalized in the intensive care unit 6 days ago due to malnutrition (suffers from anorexia). Parenteral nutrition was initiated. After 3 days she started coughing, her temperature increased up to 38.6° C. Physical examination: respiratory rate 20 times per minute, arterial blood pressure 110/70 mm Hg, heart rate 88 times per minute. On auscultation you can hear rales and dry crackles in the lower parts of both lungs, the intensity of the crackles changes while coughing. Chest X-ray showed infiltration on lower parts of both lungs. CRP 92 mg/l. WBC 12x10*9/l. Treatment with intravenous amoxicillin with clavulanic acid 1.2 g 4 times per day was prescribed (3 days ago). Today chest X-ray was repeated, it shows that the infiltration in lower parts of both lungs remains unchanged. CRP is now 40 mg/l, WBC 9x10*9/l. Physical examination: respiratory rate 18 times per minute, arterial blood pressure 110/70 mmHg, heart rate 80 times per minute, body temperature – up to 37.5° C. On auscultation there are still some rales. What are your next steps? Which answer is correct? Choose one:

a. Instead of amoxicillin with clavulanic acid I will prescribe intravenous meropenem 1 g 4 times a day and I'll repeat blood tests after one day.
b. I will continue prescribed treatment and I'll repeat blood test after two days.
c. Instead of amoxicillin with clavulanic acid I will prescribe intravenous piperacillin with tazobactam 4.5 g 4 times a day and I'll repeat blood tests after one day.
d. Instead of amoxicillin with clavulanic acid I will prescribe intravenous piperacillin with tazobactam 4.5 g 4 times a day and I'll repeat blood tests after two days.
e. Instead of amoxicillin with clavulanic acid I will prescribe intravenous imipenem with cilastatin 1 g 4 times a day and I'll repeat blood tests after one day.

A 50-year-old man presented to a local clinic with headaches and a progressing rash on his trunk. On physical examination, she had a large circular red rash on his back with a bull's-eye appearance, 16 × 18 cm in diameter. The patient could recall a walk through the woods 3 weeks prior. Serologic tests confirmed a diagnosis of Lyme disease. Diagnosis:



Select one:

A. Erythema multiforme
B. Erythema migrans
C. Acrodermatitis chronica
D. Numular eczema
E. Borelial lymphocytoma

A 33 year old man complains of pain in epigastric area. Endoscopy shows damages due to duodenal ulcer. Helicobacter pylori (HP)stool antigen test is positive (ELISA method). Which statements are right?
Select one or more:

A. HP bacteria increases the risk of developing gastric carcinoma or lymphoma
B. HP bacteria is usually the cause of duodenal ulcers
C. HP bacteria may be associated with stomach ulcers
D. HP infection can be detected using rapid urease test (CLO test)
E. The HP antigen can be detected by serological tests

A 29-year-old man complains of fever, sore throat, weakness and lack of appetite.
Medical history: on August 27, he began to have a fever up to 38C, the fever lasted up to 10 days; the highest temperature - 39.4C - was on August 30 and continued for a few more days. At the same time, sore throat appeared and the lymph nodes in the underjaw and neck increased. On August 31, a faint rash appeared on the trunk and persisted for 2 days.
Evaluating the epidemiological anamnesis, the patient does not deny homosexual relations, he had an accidental unprotected intercourse on August 9. Before that, in summer 2021, he was tested for HIV with a rapid test which was negative. He works as a manager in a trading company, in his work he communicates a lot with customers of various ages.

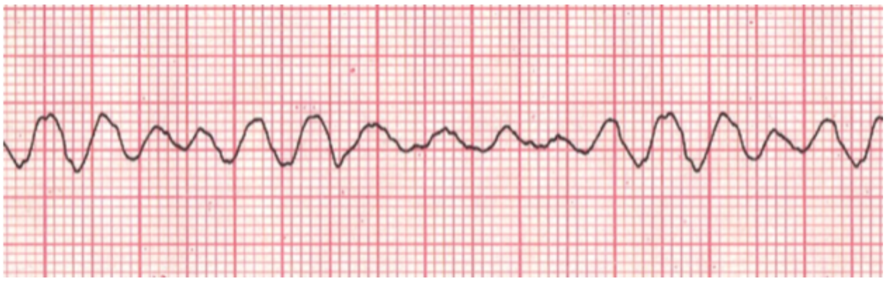
At physical examination: t 37.2C, white exudate on the tongue, enlarged and erythematous tonsils, palpable discretely enlarged lymph nodes in the underjaw and neck on both sides, maculopapular rash on the trunk, BP 142/82 mmHg, HR 90 beats/min, height 189 cm, weight 76 kg.
Which diseases should you include in the differential diagnosis when evaluating the available clinical and epidemiological data one week after the onset of the disease?
Select one or more:

a. Streptococcal tonsilitis
b. Infectious mononucleosis
c. Acute viral hepatitis A
d. Primary (acute) human immunodeficiency virus (HIV) infection
e. Meningococcemia

Results of the cerebrospinal fluid analysis: CSF is clear, colorless, opening pressure – mmH2O, cell count – 320 WBC per mm3 (10% neutrophils, 75% lymphocytes, 15% monocytes), protein concentration – 0,88 g/L, glucose concentration - 3,1 mmol/L (serum glucose concentration - 5,1 mmol/L). The results are most compatible with the diagnosis of: Select one:

a. Subarachnoid hemorrhage.
b. CSF results are normal.
c. Viral meningitis.
d. Brain tumor.
e. Bacterial meningitis.

In the ICU, a patient suddenly becomes unresponsive, pulseless, and hypotensive, with cardiac monitor indicating rhythm abnormality showed below. The first therapeutic step among the following should be: Select one:



a. Lidocaine 1.5 mg/kg IV push
b. Defibrillation
c. Epinephrine
d. mg IV push
e. Adenosine 6mg IV push
f. Amiodarone 300 mg IV push

A 76-year old patient arrived to the emergency department because of tongue angioedema. Tongue swelled tonight, swelling is progressing. He use perindopril and amlodipine for primary arterial hypertension for one year. There were no angioedema in the past.
Which statement is correct?

a. Idiopathic angioedema is suspected
b. Hereditary angioedema is suspected
c. Angioedema caused by ACE inhibitor is suspected
d. Allergic angioedema is suspected
e. Angioedema caused by insect stings.

Boy referred to clinical geneticist at the age of 1 y. 8 mo., with growth and developmental delay.
**Anamnesis:** Boy was born in Ireland, full term, birth weight – 2650 g, head circumference – 30 cm. At 1 week of age boy was diagnosed with phenylketonuria (PKU).
**Family history:** mother has classic PKU diagnosed by newborn screening in Lithuania; she moved to Ireland, when became an adult and did not inform doctors about her PKU. IQ – 68.
**Objectively:** at the age of 1 y. 8 mo. boy's weight and head circumference < 3rd centile, cannot walk independently. Phenotypic traits: low nasal bridge, long and smooth philtrum, thin upper lip, transverse palmar crease.
Check the correct statements:

a. PKU is inherited in an autosomal recessive manner. The chance that another child in this family will have PKU is 50 %.
b. PKU is inherited in an autosomal recessive manner. The chance that another child in this family will have PKU is 25 %.

c. Dietary treatment for life is recommended for this boy.
d. Trisomy 21 is most likely the cause of the boy's phenotype
e. It is most likely that the boy's mother did not adhere to the PKU dietary treatment during pregnancy

Peter was driving several times in an irresponsible and dangerous manner, that had put the other road users in a risk. He was stating: I'm in a rush to come back to my wife, to help her dealing with the kids. What is the defense mechanism used:

a. Sublimation
b. Rationalisation
c. Projection
d. Displacement

A 54-year-old woman presents with sudden onset severe headache. Her Glasgow Coma Scale is 12 (E3M6V3), right pupil is dilated, meningeal signs positive, no other neurological signs. Emergency brain CT scan revealed a blood in basal subarachnoidal cisterns, lateral ventricles enlarged. Main two management options: Select one or more:

a. CT angiogram
b. Transcranial doppler
c. Lumbar puncture
d. External ventricular drainage
e. C-reactive protein test

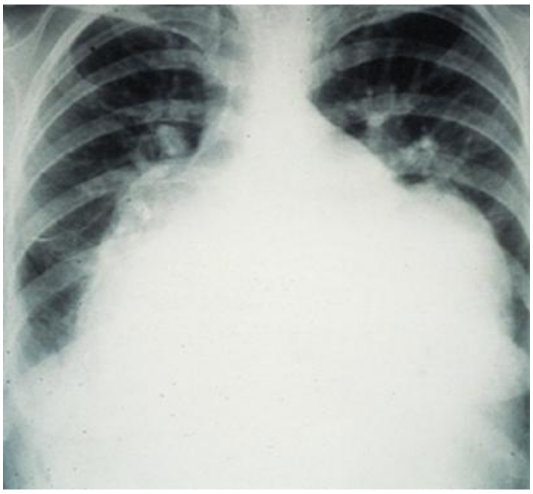
A 63-year-old man presents with a chest pain lasting for 3 hours. Patient is hemodynamically stable. ECG reveals a ST-segment elevation anterolateral acute myocardial infarction. His troponin level at admission is elevated to 12000 ng/l. He has a past medical history of familial hypercholesterolemia but doesn't take any medication. His total cholesterol level is 11.3 mmol/l. His initial treatment at emergency department should include everything except: Select one:

a. Unfractionated heparin
b. Indometacin
c. Oxygenation
d. Pain relief (i/v opioids)
e. Ticagrelor 180 mg (oral)
f. Aspirin 300 mg (oral)

38 years old male admitted to the emergency room with severe right flank pain. An hour before he felt down from 2.5 m height platform and receive blunt trauma of right body side. Suddenly after trauma hematuria appeared. In emergency room, pain remains very intensive. Physical examination: right flank subcutaneous haematoma, blood pressure 110/65 mmHg, pulse 96 b/min. Sonoscopy: There is no hydronephrosis. Around right kidney detected 10 cm size haematoma. What further investigation we Need? Select one:

a. Cystoscopy
b. Plain X-Ray (KUB)
c. Magnetic resonance scan
d. Contrast CT (CT urography)
e. Excretory pyelogram

78 year old man complains of severe dyspnoe at rest, edema in legs, weakness, and fatigue. On X-ray you can see pathological heart configuration. What statements are right?



Select one or more:

a. Mitral shape of the heart
b. Enlargement only of the right ventricle
c. Enlargement of left ventricle, left atrium and right ventricle
d. Typical for mitral regurgitation and mitral stenosis
e. Aortal shape of the heart

Which of the following diagnostic tests are MOST appropriate for a patient with fever, a new heart murmur, blood cultures that are growing gram-positive cocci in chains?
Select one or more:

a. WBC
b. Transesophageal echocardiogram (TEE)
c. Antistreptolysin O titer
d. Troponin I and T
e. Transthoracic echocardiogram (TTE)

A 65 years old patient in September presented with strabismus, diplopia, mydriasis, right eye ptosis, the movement disorders of the left eye, dysarthria, swallowing disorder. She had no fever and was conscious. The CSF examination revealed no pathological changes, the computer tomography of head did not show any pathological findings. She often picked up mushrooms in the forest, liked to preserve them. Which disease can be suspected? Select one:

a. Tick borne encephalitis
b. Lyme borreliosis
c. Tetanus
d. Rabies
e. Botulism

You are caring for a 32-year-old female smoker with upper respiratory symptoms. She reports congestion, facial pressure, nasal discharge, tooth pain, and headache. Her symptoms have been present for 14 days. Which portion of her history is most commonly used to define clinical rhinosinusitis?

a. Tooth pain
b. Nasal discharge
c. Headache
d. Facial pressure
e. 14-days of illness

A 61-year-old patient arrived to the Memory clinic with his son accompanying him. The patient has no complaints regarding his health. The patient's son says that the patient experiences difficulties with his language - the lack of words is present, the patient is not able to name even simple objects, the patient rarely speaks, his sencences are short and he is unable to formulate a correct sentence. Behaviour of the patient has also changed. His behaviour is strange inappropriate. The first signs of the disease appeared a year ago. The patient's condition gradually deteriorates. Physical and neurological examination: arterial blood pressure - 130/84 mmHg, heart rate - 72 beats/min. The state of consciousness normal. Symptoms of motor aphasia. Pathological grasp reflexes present. No other neurological signs. Meningeal symptoms absent. MMSE - 24 points. What is the preliminary diagnosis?

a. Alzheimer's disease.
b. Vascular dementia.
c. Frontotemporal dementia.
d. Delirium.
e. Mild cognitive impairment.

35-year-old female was investigated because of menstrual cycle abnormalities and infertility. Hyperprolactinemia and pituitary microadenoma were found after diagnostic work-up. Which medications can restore fertility in this patient? Select one:

a. Dopamine agonists
b. Dopamine antagonists
c. Somatostatin analogs
d. Estrogen/progesterone replacement therapy

A 30 year old woman is reffered to an endocrinologist due to suspected hypothyrosis. It is known that the patient had underwent treatment by combined chemotherapy (doxorubicin, bleomycin, vinblastine, dacarbazine) and radiotherapy (to the chest region) for Hodgkin's lymphoma at age 16. What are possible long term adverse events of this combined treatment:

a. Coronary artery disease and hyperthyroidism
b. Bladder cancer, osteosarcoma, hypothyroidism
c. Acute lymphoblastic leukemia, acute myeloblastic leukemia, hypothyroidism
d. Breast and ovarian cancer, hypothyroidism and coronary artery disease
e. Acute myeloblastic leukemia, breast cancer, hypothyroidism and coronary artery disease

25 years old male presented with acute complaints of photophobia, redness, poor vision and pain in his left eye. No previous ocular trauma. Medical history: low back pain for half a year.
Status ophthalmicus:
Best corrected visual acuity
Oculus dexter = 1.0
Oculus sinister = 0.5
Intraocular pressure:
Oculus dexter = 17 mmHg
Oculus sinister = 25 mmHg
Slit lamp examination:
Oculus dexter: unremarkable.
Oculus sinister: central conjunctival injection, fine keratic precipitates, deep anterior chamber with cells and flare, miosis, clear vitreus. Ophthalmoscopy: unremarkable.
Which diagnosis is the most likely?

a. Acute conjunctivitis
b. Acute keratitis
c. Acute iridocyclitis
d. Intermediate uveitis
e. Acute angle closure glaucoma

A 30-year-old male presented with cough, right sided chest pain, shortness of breath, fatigue, weight loss. Last few months he had a lot of work, emotional tension, not enough time for eating. Never smoker, no history of alcohol abuse. Physical examination: respiratory rate 18 times per minute. On auscultation diminished breath sounds on right lung lover lobe. No other findings. Chest X-ray and ultrasonography showed medium quantity right sided pleural effusion, with no lung infiltration. Thoracentesis was performed and 1.5 l of serous fluid was aspirated. Pleural fluid examination showed exudative effusion, with predominance of lymphocytes (40%). Malignant cells, bacteria, acid-fast bacillus were not found. Pleural fluid culture was also negative. Result of pleural fluid M. tuberculosis cultures is awaiting. After 3 days chest X-ray showed a recurrence of pleural fluid. What would be your following steps? Which answer is incorrect? Select one:

a. I will repeat the puncture of the pleural cavity and remove the accumulated fluid. I advise waiting for the results of testing for tuberculosis mycobacteria.
b. I will order a sputum tests for tuberculosis
c. I will direct the patient to drain the pleural cavity. I advise waiting for the results of testing for tuberculosis mycobacteria.
d. I refer the patient to a specialized center for pleurodesis
e. I refer the patient to a specialized center for pleural punctate (fluid) flow cytometry, pleural biopsy

Patient was diagnosed with acute viral respiratory tract infection complicated with an acute bronchitis. The patient is ill for 3 days. He complains of cough and fever up to 37 ° C. Patient has no other symptoms. His vital signs are normal. Which answer is correct? (similar question already in this file, but still different)

a. I will prescribe mucolytics (e.g. acetylcysteine).
b. I will not prescribe any medications.
c. I'll prescribe treatment with antibiotics, non-steroidal anti-inflammatory drugs (NSAIDs) and mucolytics (e.g. acetylcysteine).
d. I will prescribe a non-steroidal anti-inflammatory drug (NSAIDs) and mucolytics (e.g. acetylcysteine).
e. I'll prescribe treatment with antibiotics.

26 year-old woman presented with impaired left-eye vision for 3 days, right-side numbness, weakness of right foot and impaired balance. She reported an episode of impaired right-eye vision 6 years ago which improved within 3 weeks; optic neuritis was diagnosed. Neurological examination: left–eye vision 0.4, horizontal nystagmus to the left, right eye deviation to the lateral side, brisk tendon reflexes (right> left), positive Babinski sign on the right. Positive Barré test (pyramidal drift) was prominent in the right leg. Limb ataxia (left>reght). Which drug or procedure would you prescribe during the relapse and for the first line disease modifying long-term treatment? Select one:

a. Start with statins and antiplatelet drugs and later to continue oral prednisolone for long-term treatment.
b. Start with high doses of methylprednisolone pulse-therapy during and/ or plasma exchange for the relapse; immunomodulative therapy (interferons beta, glatiramer acetate, teriflunomide) for long-term treatment.
c. Start with immunosuppressants (azathioprine or mitoxantrone) during the relapse; continue the same drug for long-term therapy.
d. There is any treatment for the acute relapse, because the disease is autoimmune demyelinated.
e. Immunomodulative drugs (fingolimod or natalizumab, or alemtuzumab) during the relapse; continuous plasma exchange course for long-term treatment.

10-year-old Daniel fell off a ladder while playing in the yard. He came to the emergency department because of general weakness and abdominal pain. The boy was diagnosed with a ruptured spleen, thus surgical treatment was recommended. Daniel and his parents are Jehovah's Witnesses. They object the recommended surgery which requires blood transfusion. What should a doctor do?

a. To get permission from the court
b. To perform surgery against parental objection
c. The first two options are correct
d. None of the options are correct
e. To obey the parental decision

36-year-old woman was consulted because of dizziness, general weakness, unregular menstrual cycle. Physical examination: hyperpigmentation of the skin was noted as well as reduced axillary and pubic hair, BP 90/50 mmHg, pulse 90 beats/min. Thyroid not enlarged, small nodules were palpable. What endocrine disease as the cause of the symptoms would you suspect?

a. Graves' disease
b. Autoimmune thyroiditis
c. Secondary adrenal insufficiency
d. Primary adrenal insufficiency
e. Primary hypogonadism

67-year-old male ran to the bus for a short period of time. Once in the bus, he felt frequent heartbeat and shortness of breath. Then he suddenly lost consciousness and fell down. The episode was short (10-15 seconds) with quick recovery. There was no tongue bite or involuntary urination. What is the most probable diagnosis?

a. Cardiogenic syncope.
b. Cataplexy.
c. Vasovagal syncope.
d. Generalized epilepsy.
e. Hypoglycemia.

A 26-year-old man was diagnosed with gonorrhea. A proper treatment was applied. What would be your next recommendation?
Select one or more:

a. Find out who are the partners and treat them
b. Exclusion of barrier contraception
c. No sexual contact until treatment is completed
d. Vaccination against hepatitis B and HPV
e. Testing for other sexually transmitted infection/-s

Yesterday you admitted a 55-year-old white male to the hospital due to chest pain and ruled out myocardial infarction (MI). The patient tends to be anxious about his health. On admission, his lungs were clear, and his heart revealed a grade II/VI systolic crescendo-decrescendo murmur at the upper right sternal border; cardiac enzymes were normal, and resting ECG showed right bundle branch block (RBBB) with less than 1 mm ST segment depression. The idea of performing a routine Bruce protocol treadmill exercise test to further assess coronary artery disease was considered, but rejected primarily due to which of the following? Select one:

a. Anticipated difficulty with the patient's anxiety (i.e., he might falsely claim chest pain during the test)
b. The presence of RBBB, with this baseline ECG change obscuring typical diagnostic ST-T changes
c. Pulmonary embolus suspected as the primary diagnosis
d. Concern about the presence of aortic stenosis, a contraindication to stress testing
e. Concern that this represents the onset of unstable angina with unacceptable risk of MI with stress testing

74 years old previously healthy woman complains of strong pain in the shoulder girdle and pelvis girdle which limits her to perform daily tasks and even to dress up. The patient became depressed and lost weight. Her primary care physician performed laboratory tests and found highly elevated ESR and CRP without any data of infection. Which disease was suspected?

a. Systemic lupus erythematosus
b. Ankylosing spondylitis
c. Polymyalgia rheumatica (Anja)
d. Postmenopausal osteoporosis
e. Osteochondrosis of cervical and lumbar spine parts

43-year-old obese patient comes to your office with a painful, inflamed, swollen elbow. He reports that the pain began suddenly last evening, without a known precipitant or trauma. The pain is exquisite and does not allow him to move his elbow at all—in fact, even the pressure of his bed sheet on his elbow was painful. On examination, he has an elbow effusion with warmth, erythema, and intense pain with movement. Which of the following is most likely the cause?
Select one:

a. A stress fracture
b. Gout
c. Cellulitis
d. Rheumatoid arthritis
e. Osteoarthritis

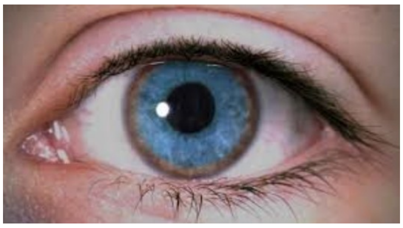
Patient is treated in the intensive care unit. His eyes are closed, there is no reaction to verbal stimuli. After painful stimulus patient opens his eyes, moans, flexes his arms and extends the legs. Use the Glasgow coma scale to assess the level of patient‘s consciousness.

a. 9.
b. 7.
c. 11.
d. 13
e. 5.

A 65-year-old woman is evaluated for recurrent episodes of vertigo with nausea and sometimes vomiting that started 2 days ago. Vertigo is very short and is triggered by head movement: rolling over in bed, leaning down and backwards. She has no other neurological symptoms, no impairment of hearing, no headache, and routine neurological examination is normal. At the end of examination, the severe vertigo with nausea and positional nystagmus was provoked with positional Dix-Hallpike maneuver. What cause of this vertigo do you suspect?
Select one:

a. Meniere’s disease.
b. Vestibular neuritis.
c. Transient ischemic attack in the carotid territory.
d. Transient ischemic attack in the vertebrobasilar territory.
e. Benign paroxysmal positional vertigo.

This 13 year old girl presented to the family physician due to behavioral problems at home and school. She has also a 15 month history of intermittent abdominal pain and episodes of jaundice which has not been investigated so far. The pediatrician asks for a review from ophthalmology. What is the name of the sign shown and what's the diagnosis?



Select one or more:

a. Copper deposits in cornea, accumulation in liver, brain
b. Kayser-Fleischer rings
c. Wilson disease
d. Maybe lens
e. Haemochromatosis

A 32-year-old woman complains of weight gain, drowsiness, fatigue, general weakness and hair loss.
Medical history: she was administered radioiodine (J131) therapy 2 years ago for the treatment of Graves' disease.
Physical examination: thyroid gland is not enlarged, no palpable nodules. The skin is pale, without rashes. BP 95/60 mmHg, HR 62 bpm.
Blood tests performed: thyroid stimulating hormone (TSH) 11.2 mU/l (0.4-4.0), free thyroxine (FT4) 8.3 pmol/l (9-19). What pathology will you suspect? Select one:

a. Graves' disease relapse
b. Post-radioiodine hypothyroidism
c. Chronic adrenal insufficiency
d. Secondary hypothyroidism
e. TSH-secreting pituitary adenoma

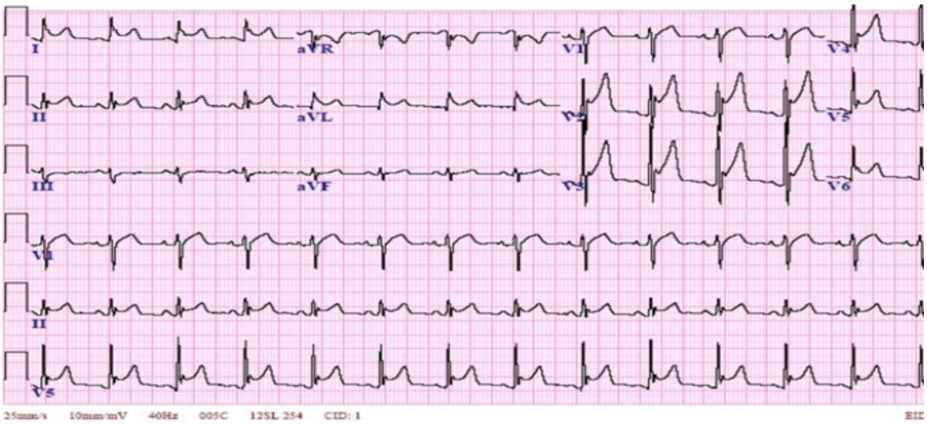
What is this disorder?
A 35-year-old patient was brought to a mental health center for consultation. It is known that for about 1 month he is very energetic, talking, sleeping only 2-3 hours. Lets play music loudly at night, ignores notes. Spent all the family savings. Borrowing money from friends. A similar condition is repeated for the third time. He was first treated in a hospital at the age of 25. There has been no depression.
Select one:

a. Emotionally unstable personality disorder
b. Generalized anxiety disorder
c. Nonorganic insomnia
d. Recurrent manic disorder
e. Bipolar affective disorder, current epizode manic without psychotic symptoms

A 78-year-old lady complains of inability to walk longer than 100 m. Mobility is limited by increasing weakness of both legs, pain in distribution of L5 and S1 dermatomes. Examination: bilateral hypoesthesia L5 and S1, no motor deficits, tendon reflexes very low in the legs. MRI: significant narrowing of lumbar spinal canal. Which method of treatment is the most effective? Select one:

a. Surgical decompression of spinal canal.
b. Physiotherapy.
c. Non-steroidal anti-inflammatory drugs.
d. Lumbar bracing.
e. Spinal injections.

A 32 year old male with no significant medical history presents to the emergency room with 3 hours chest pain at rest and dyspnoae. He recently has had an upper respiratory tract infection for wich has been taking medications for symtpoms relief His blood pressure is 120/80, heart rate 80, respirations 20. Physical examination is normal. Chest x-ray and laboratory is normal. His ECG is below. Which diagnosis is the most likely?



a. Dilated cardiomyopathy
b. Myocardial ischemia
c. Pneumonia
d. Pericarditis
e. Pulmonary artery embolisacion

High dose of drug was administered to patient. You would like to know how much of drug would be left in patient's body after 24 h, if it's elimination half-life is 6 h and it's eliminated by first-order kinetics?

a. 100%
b. 50%
c. 12,5%
d. 6,25%
e. 25%

What is this disorder?

The patient was 25 years old, hospitalized for the first time. She has not been treated with antipsychotics before. The patient was brought to the ward on a stretcher. The patient lies in a numb, indifferent facial expression, her gaze blurred at one point. Her pupils respond well to light, not to pain. The patient does not speak, does not make any requests, saliva accumulates in the mouth, leaking over the edge of the lips. The doctor raised the patient's hand. She has been in that awkward position for a long time. The doctor pulled out the pillow of the lying patient. Her head hangs in the air. The patient did not eat, urinated under himself.

a. Depression
b. Sopor
c. Dementia
d. Meningitis
e. Catatonia

A 45-year-old woman complains of heart palpitations, sweating, irritability. She has no history of endocrine diseases, no concomitant diseases and does not take any medications. Physical examination: thyroid gland is enlarged (goiter stage IB), a 3 cm nodule can be felt in the right lobe. The skin is warm, no rashes. Finger tremor absent. HR 86 bpm BP 135/62 mmHg.

Blood tests performed: thyroid stimulating hormone (TSH) 0.04 mU/l (0.4-4.0), free thyroxine (FT4) 15.6 pmol/l (9-19), free triiodothyronine (FT3) 6.71 pmol/l (2.89-5.88). Thyroid ultrasound: in the center of the right lobe non-homogeneous 29x18x24 mm isoechoic nodule with clear margins is seen. Left lobe without nodes. Thyroid scintigraphy was performed: almost all the radiotechnetium is up taken by the oval area of the right lobe, the remaining thyroid tissue does not accumulate the radionuclide. What is the patient's diagnosis?

a. Graves' disease
b. Toxic multinodular goiter
c. Subacute thyroiditis
d. Nodular euthyroid goiter
e. Toxic thyroid adenoma

A 79-year-old woman two weeks ago had received medical treatment for acute exacerbation of chronic bronchitis. Examination has revealed that the symptoms still are present and the treatment is ineffective. The patient says that she lives alone, takes care of herself sufficiently, and is taking the drugs correctly. Patient's daughter, who accompanied, complains that she is unfairly criticized by her mother for a lack of communication and help. What tests or procedures should be done to evaluates cognitive function among the elderly?

a. Functional independence measurement
b. Barthel index
c. Timed Up and Go test
d. Mini-Mental State examination
e. All of the above

Your collegue from Emergency room department is asking you for help. He has a 62 year old patient with febrile fever and general fatigue. Blood work shows PLT 74x109/l, HgB 102 g/l, WBC 18.4x109/l, monocytes 13.1x109/l, neutrophils 1.4x109/l. Your colleague is still waiting for CRP as well as creatinine, liver enzymes. What additional test would You recommend? Select one:

a. Direct and indirect Coombs test
b. Blood smear
c. Feritin
d. B12 and folic acid in blood
e. Blood imunophenotyping for monocyte lineage abberations